

Cys Glu Ala Gln Arg Cys Ser Gln Glu Cys Ala Asn Ile Tyr Gly Ser	
370 375 380	
tac cag tgc tac tgc cgc cag ggc tac cag ctg gct gag gat ggg cac	1320
Tyr Gln Cys Tyr Cys Arg Gln Gly Tyr Gln Leu Ala Glu Asp Gly His	
385 390 395	
acc tgc aca gac atc gac gag tgt gct caa ggc gcc ggc atc ctc tgc	1368
Thr Cys Thr Asp Ile Asp Glu Cys Ala Gln Gly Ala Gly Ile Leu Cys	
400 405 410	
acc ttc cgc tgt ctc aac gtg cca ggg agc tac cag tgt gca tgc cct	1416
Thr Phe Arg Cys Leu Asn Val Pro Gly Ser Tyr Gln Cys Ala Cys Pro	
415 420 425	
gag cag ggc tac acc atg acg gcc aac ggg agg tcc tgc aag gac gtg	1464
Glu Gln Gly Tyr Thr Met Thr Ala Asn Gly Arg Ser Cys Lys Asp Val	
430 435 440 445	
gat gag tgt gca ctg ggt acc cac aac tgt tcc gag gct gag acc tgc	1512
Asp Glu Cys Ala Leu Gly Thr His Asn Cys Ser Glu Ala Glu Thr Cys	
450 455 460	
cac aac atc cag ggt agc ttc cgc tgc ctg cgc ttc gag tgt cct ccc	1560
His Asn Ile Gln Gly Ser Phe Arg Cys Leu Arg Phe Glu Cys Pro Pro	
465 470 475	
aac tat gtc caa gtc tcc aaa acg aag tgc gag cgc acc acg tgc cat	1608
Asn Tyr Val Gln Val Ser Lys Thr Lys Cys Glu Arg Thr Thr Cys His	
480 485 490	
gac ttc ctg gag tgc cag aac tcg cca gcg cgc atc acg cac tac cag	1656
Asp Phe Leu Glu Cys Gln Asn Ser Pro Ala Arg Ile Thr His Tyr Gln	
495 500 505	
ctc aac ttc cag acg ggc ctc ctg gtg cct gcg cat atc ttc cgc att	1704
Leu Asn Phe Gln Thr Gly Leu Leu Val Pro Ala His Ile Phe Arg Ile	
510 515 520 525	
ggc ccc gcg cca gcc ttc aca ggg gac acc atc gcc ctg aac atc atc	1752
Gly Pro Ala Pro Ala Phe Thr Gly Asp Thr Ile Ala Leu Asn Ile Ile	
530 535 540	
aag ggc aat gag gag ggc tac ttt ggc acg cgc agg ctc aat gcc tac	1800
Lys Gly Asn Glu Glu Gly Tyr Phe Gly Thr Arg Arg Leu Asn Ala Tyr	
545 550 555	
acg ggt gtg gtc tac ctg cag cgg gcc gtg ctg gag ccc cgg gac ttt	1848
Thr Gly Val Val Tyr Leu Gln Arg Ala Val Leu Glu Pro Arg Asp Phe	
560 565 570	
gcc ctg gat gtg gag atg aag ctc tgg agg cag ggc tcc gtc acc acc	1896
Ala Leu Asp Val Glu Met Lys Leu Trp Arg Gln Gly Ser Val Thr Thr	
575 580 585	
ttc ctg gcc aag atg cac atc ttc ttc acc acc ttt gcc ctg tga ggt	1944
Phe Leu Ala Lys Met His Ile Phe Phe Thr Thr Phe Ala Leu *	
590 595 600	
gccagcacgg gccacctgcg ggtgtggcgc agcccagggc tcacactgcg tgggagggac	2004
tgggtcacta ttgtgggttt tactataact ttgtaaatta acttaatttt gctgacttga	2064
ctcctgtggc ttctggaccc ctccctctgcc ccgcaggagg aagttccacg gcagggtggtg	2124

```

cggtccacg caggcaccaa gtggaagctt gcacggtggg ccacggccgt ggcgggtgcc 2184
ctgtgggtga ggctgggtga tgacctgagg accagagaca cgcgaccatg ttggggctct 2244
tggactcctc tggatgaccc gtccccaag ttgacattcc atttcatgtt ccactgtgat 2304
taattctttt cttttttaaa aaatcatttt aaagtttttt gtttaattat aaagtagtac 2364
atgtacatta taaaaaaaaa agttcaacta gtatgaaagg gttataaagt aacagaggaa 2424
aacaaaaaaaa aaaaaaa 2441

```

```

<210> 870
<211> 970
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> CDS
<222> (231) .. (452)

```

```

<400> 870
ttgccactg acccggcagt tatgagcctg gctttggcac tcccagcttt gtgactttgg 60
gtgagcctta cagccctga gtcctacacc cagaagggtg ctgagggaac tgaggccagc 120
atttttctc ctgccctgg gggtttggg cgggttctc cctcttctg aagcacaaag 180
tccctcccc acctaccctt cctgcagatg gcttctcaaa ctcgggcatc atg gaa 236
Met Glu
1
gag cgc ccc cta gac gca gtg gtg ccc ttc ctc ccg ctc cag cgg cac 284
Glu Arg Pro Leu Asp Ala Val Val Pro Phe Leu Pro Leu Gln Arg His
5 10 15
cac gtc cgg cac tgc gtg ctc aac gag ctg gcc cag ctg ggc ctg gag 332
His Val Arg His Cys Val Leu Asn Glu Leu Ala Gln Leu Gly Leu Glu
20 25 30
cca agg gat gag gtt gtc cag gct gtg ctg gac agc acc acc ttc ttc 380
Pro Arg Asp Glu Val Val Gln Ala Val Leu Asp Ser Thr Thr Phe Phe
35 40 45 50
cct gaa gac gag cag ctc ttc tcc tcc aac ggc tgc aag acc gtg gcc 428
Pro Glu Asp Glu Gln Leu Phe Ser Ser Asn Gly Cys Lys Thr Val Ala
55 60 65
tcc cga atc gcc ttc ttc ctc tga ctctctgagt ggtgtcctcg gccccctga 482
Ser Arg Ile Ala Phe Phe Leu *
70
tggccaggcc atgcaggaaa ggccaggggc ctctgtcaca ggaaccaga gcaccaagtg 542
agatgaacgg agtgtcggct aggccacggg acagatggcc aggaagggcc ctggcctcta 602
aactggctcg agagcatctt ggccccggcc accttcccca gggaaacccc tggtcacccc 662
agaacctcac tgagccttga cctccccctg cagcctgagc cttcttactg tgaattataa 722

```

```

ctcaggggact gtggctcgtg gcggtgctcc ctcctcagtc tgccaccctt gccccttgcc 782
tccttggtcg ggcaccatac ctcctccctt ccacccca cctgtgtgcc atatcaagcc 842
agggtggagcc ttctcagttt ccagaaatgg agggactcaa gctgccactt gggcctggtt 902
ttagatgttt ttaattttgt aaaagaaaac aagtataata aactcagctg tgggaccaga 962
aaaaaaaaa 970

```

```

<210> 871
<211> 6813
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> CDS
<222> (102)..(3752)

```

```

<400> 871
gaagcagaga agggaggccg cgccacgcgc tccgcgcccc ggcagtgctc cccagtacat 60
ggcgcgctcg ccgagtcgac tcgaagccca gatgagccca g atg ccc ggg gct 113
Met Pro Gly Ala
1
caa ccc gga gtg cac gcc ttg caa ctc aag ccc gtg tgc gtg tgc gac 161
Gln Pro Gly Val His Ala Leu Gln Leu Lys Pro Val Cys Val Ser Asp
5 10 15 20
agc ctc aag aag ggc acc aaa ttc gtc aag tgg gat gat gac tca act 209
Ser Leu Lys Lys Gly Thr Lys Phe Val Lys Trp Asp Asp Asp Ser Thr
25 30 35
agt gtt act cca att att gtg agg act gac cct cag gga ttt ttc ttt 257
Ser Val Thr Pro Ile Ile Val Arg Thr Asp Pro Gln Gly Phe Phe Phe
40 45 50
tac tgg aca gat caa aac aag gag aca gag cta ctg gat ctc agc ctt 305
Tyr Trp Thr Asp Gln Asn Lys Glu Thr Glu Leu Leu Asp Leu Ser Leu
55 60 65
gtc aaa gat gcc aga tgt ggg aga cac gcc aaa gct ccc aag gac ccc 353
Val Lys Asp Ala Arg Cys Gly Arg His Ala Lys Ala Pro Lys Asp Pro
70 75 80
aaa tta cgt gaa ctt ttg gat gtg ggg aac atc ggg cgc ctg gag cag 401
Lys Leu Arg Glu Leu Leu Asp Val Gly Asn Ile Gly Arg Leu Glu Gln
85 90 95 100
cgc atg atc aca gtg gtg tat ggg cct gac ctc gtg aac atc tcc cat 449
Arg Met Ile Thr Val Val Tyr Gly Pro Asp Leu Val Asn Ile Ser His
105 110 115
ttg aat ctc gtg gct ttc caa gaa gaa gtg gcc aag gaa tgg aca aat 497
Leu Asn Leu Val Ala Phe Gln Glu Glu Val Ala Lys Glu Trp Thr Asn
120 125 130
gag gtt ttc agt ttg gca aca aac ctg ctg gcc caa aac atg tcc agg 545
Glu Val Phe Ser Leu Ala Thr Asn Leu Leu Ala Gln Asn Met Ser Arg
135 140 145

```

gat gca ttt ctg gaa aaa gcc tat act aaa ctt aag ctg caa gtc act	593
Asp Ala Phe Leu Glu Lys Ala Tyr Thr Lys Leu Lys Leu Gln Val Thr	
150 155 160	
cca gaa ggg cgt att cct ctc aaa aac ata tat cgc ttg ttt tca gca	641
Pro Glu Gly Arg Ile Pro Leu Lys Asn Ile Tyr Arg Leu Phe Ser Ala	
165 170 175 180	
gat cgg aag cga gtt gaa act gct tta gag gct tgt agt ctt cca tct	689
Asp Arg Lys Arg Val Glu Thr Ala Leu Glu Ala Cys Ser Leu Pro Ser	
185 190 195	
tca agg aat gat tca ata cct caa gaa gat ttc act cca gaa gtg tac	737
Ser Arg Asn Asp Ser Ile Pro Gln Glu Asp Phe Thr Pro Glu Val Tyr	
200 205 210	
aga gtt ttc ctc aac aac ctt tgc cct cga cct gaa att gat aac atc	785
Arg Val Phe Leu Asn Asn Leu Cys Pro Arg Pro Glu Ile Asp Asn Ile	
215 220 225	
ttt tca gaa ttt ggt gca aaa agc aaa cca tat ctt acc gtt gat cag	833
Phe Ser Glu Phe Gly Ala Lys Ser Lys Pro Tyr Leu Thr Val Asp Gln	
230 235 240	
atg atg gat ttt atc aac ctt aag cag cga gat cct cgg ctt aat gaa	881
Met Met Asp Phe Ile Asn Leu Lys Gln Arg Asp Pro Arg Leu Asn Glu	
245 250 255 260	
ata ctt tat cca cct cta aaa caa gag caa gtc caa gta ttg att gag	929
Ile Leu Tyr Pro Pro Leu Lys Gln Glu Gln Val Gln Val Leu Ile Glu	
265 270 275	
aag tat gaa ccc aac aac agc ctc gcc aga aaa gga caa ata tca gtg	977
Lys Tyr Glu Pro Asn Asn Ser Leu Ala Arg Lys Gly Gln Ile Ser Val	
280 285 290	
gat ggg ttc atg cgc tat ctg agt gga gaa gaa aac gga gtc gtt tca	1025
Asp Gly Phe Met Arg Tyr Leu Ser Gly Glu Glu Asn Gly Val Val Ser	
295 300 305	
cct gag aaa ctg gat ttg aat gaa gac atg tct cag ccc ctt tct cac	1073
Pro Glu Lys Leu Asp Leu Asn Glu Asp Met Ser Gln Pro Leu Ser His	
310 315 320	
tat ttc att aat tcc tcg cac aac acc tac ctc aca gct ggc caa ctg	1121
Tyr Phe Ile Asn Ser Ser His Asn Thr Tyr Leu Thr Ala Gly Gln Leu	
325 330 335 340	
gct gga aac tcc tct gtt gag atg tat cgc caa gtg ctc ctg tct ggt	1169
Ala Gly Asn Ser Ser Val Glu Met Tyr Arg Gln Val Leu Leu Ser Gly	
345 350 355	
tgt cgc tgt gtg gag ctg gac tgc tgg aag gga cgg act gca gaa gag	1217
Cys Arg Cys Val Glu Leu Asp Cys Trp Lys Gly Arg Thr Ala Glu Glu	
360 365 370	
gaa cct gtc atc acc cat ggc ttc acc atg aca act gaa ata tct ttc	1265
Glu Pro Val Ile Thr His Gly Phe Thr Met Thr Thr Glu Ile Ser Phe	
375 380 385	
aag gaa gtg ata gaa gca att gcg gag tgt gca ttt aag act tca cct	1313
Lys Glu Val Ile Glu Ala Ile Ala Glu Cys Ala Phe Lys Thr Ser Pro	
390 395 400	

ttt cca att ctc ctt tgc ttt gag aac cat gtg gat tcc cca aag cag	1361
Phe Pro Ile Leu Leu Ser Phe Glu Asn His Val Asp Ser Pro Lys Gln	
405 410 415 420	
caa gcc aag atg gcg gag tac tgc cga ctg atc ttt ggg gat gcc ctt	1409
Gln Ala Lys Met Ala Glu Tyr Cys Arg Leu Ile Phe Gly Asp Ala Leu	
425 430 435	
ctc atg gag ccc ctg gaa aaa tat cca ctg gaa tct gga gtt cct ctt	1457
Leu Met Glu Pro Leu Glu Lys Tyr Pro Leu Glu Ser Gly Val Pro Leu	
440 445 450	
cca agc cct atg gat tta atg tat aaa att ttg gtg aaa aat aag aag	1505
Pro Ser Pro Met Asp Leu Met Tyr Lys Ile Leu Val Lys Asn Lys Lys	
455 460 465	
aaa tca cac aag tca tca gaa gga agc ggc aaa aag aag ctc tca gaa	1553
Lys Ser His Lys Ser Ser Glu Gly Ser Gly Lys Lys Lys Leu Ser Glu	
470 475 480	
caa gcc tcc aac acc tac agt gac tcc tcc agc atg ttc gag ccc tca	1601
Gln Ala Ser Asn Thr Tyr Ser Asp Ser Ser Ser Met Phe Glu Pro Ser	
485 490 495 500	
tcc cca gga gcc gga gaa gct gat acg gaa agt gac gac gac gat gat	1649
Ser Pro Gly Ala Gly Glu Ala Asp Thr Glu Ser Asp Asp Asp Asp	
505 510 515	
gat gat gac tgt aaa aaa tct tca atg gat gag ggg act gct gga agt	1697
Asp Asp Asp Cys Lys Lys Ser Ser Met Asp Glu Gly Thr Ala Gly Ser	
520 525 530	
gag gct atg gcc aca gaa gaa atg tct aat ctg gtg aac tat att cag	1745
Glu Ala Met Ala Thr Glu Glu Met Ser Asn Leu Val Asn Tyr Ile Gln	
535 540 545	
cca gtc aag ttt gag tca ttt gaa att tca aaa aaa aga aat aaa agt	1793
Pro Val Lys Phe Glu Ser Phe Glu Ile Ser Lys Lys Arg Asn Lys Ser	
550 555 560	
ttt gaa atg tct tcc ttc gtg gaa acc aaa gga ctt gaa caa ctc acc	1841
Phe Glu Met Ser Ser Phe Val Glu Thr Lys Gly Leu Glu Gln Leu Thr	
565 570 575 580	
aag tct cca gtg gaa ttt gta gaa tat aac aaa atg cag ctt agc agg	1889
Lys Ser Pro Val Glu Phe Val Glu Tyr Asn Lys Met Gln Leu Ser Arg	
585 590 595	
ata tat cca aaa gga aca cgt gtg gat tca tcc aac tat atg cct cag	1937
Ile Tyr Pro Lys Gly Thr Arg Val Asp Ser Ser Asn Tyr Met Pro Gln	
600 605 610	
ctc ttc tgg aat gca ggt tgt cag atg gtg gca ctt aat ttc cag aca	1985
Leu Phe Trp Asn Ala Gly Cys Gln Met Val Ala Leu Asn Phe Gln Thr	
615 620 625	
atg gac ctg gct atg caa ata aat atg ggg atg tat gaa tac aac ggg	2033
Met Asp Leu Ala Met Gln Ile Asn Met Gly Met Tyr Glu Tyr Asn Gly	
630 635 640	
aag agt ggc tac aga ttg aag cca gag ttc atg agg agg cct gac aag	2081
Lys Ser Gly Tyr Arg Leu Lys Pro Glu Phe Met Arg Arg Pro Asp Lys	
645 650 655 660	

cat ttt gat cca ttt act gaa ggc atc gta gat ggg ata gtg gca aac His Phe Asp Pro Phe Thr Glu Gly Ile Val Asp Gly Ile Val Ala Asn 665 670 675	2129
act ttg tct gtt aag att att tca ggt cag ttt ctt tct gat aag aaa Thr Leu Ser Val Lys Ile Ile Ser Gly Gln Phe Leu Ser Asp Lys Lys 680 685 690	2177
gtt ggg act tac gtg gaa gta gat atg ttt ggt ttg cct gtg gat aca Val Gly Thr Tyr Val Glu Val Asp Met Phe Gly Leu Pro Val Asp Thr 695 700 705	2225
agg agg aag gca ttt aag acc aaa aca tcc caa gga aat gct gtg aat Arg Arg Lys Ala Phe Lys Thr Lys Thr Ser Gln Gly Asn Ala Val Asn 710 715 720	2273
cct gtc tgg gaa gaa gaa cct att gtg ttc aaa aag gtg gtt ctt cct Pro Val Trp Glu Glu Glu Pro Ile Val Phe Lys Lys Val Val Leu Pro 725 730 735 740	2321
act ctg gcc tgt ttg aga ata gca gtt tat gaa gaa gga ggt aaa ttc Thr Leu Ala Cys Leu Arg Ile Ala Val Tyr Glu Glu Gly Gly Lys Phe 745 750 755	2369
att ggc cac cgt atc ttg cca gtg caa gcc att cgg cca ggc tat cac Ile Gly His Arg Ile Leu Pro Val Gln Ala Ile Arg Pro Gly Tyr His 760 765 770	2417
tat atc tgt cta agg aat gaa agg aac cag cct ctg acg ctg cct gct Tyr Ile Cys Leu Arg Asn Glu Arg Asn Gln Pro Leu Thr Leu Pro Ala 775 780 785	2465
gtc ttt gtc tac ata gaa gtg aaa gac tat gtg cca gac aca tat gca Val Phe Val Tyr Ile Glu Val Lys Asp Tyr Val Pro Asp Thr Tyr Ala 790 795 800	2513
gat gtc atc gaa gct tta tca aac cca atc cga tat gtg aac ctg atg Asp Val Ile Glu Ala Leu Ser Asn Pro Ile Arg Tyr Val Asn Leu Met 805 810 815 820	2561
gaa cag aga gct aag caa ttg gct gct ttg aca ctg gaa gat gaa gaa Glu Gln Arg Ala Lys Gln Leu Ala Ala Leu Thr Leu Glu Asp Glu Glu 825 830 835	2609
gaa gta aag aaa gag gct gat cct gga gaa aca cca tca gag gct cca Glu Val Lys Lys Glu Ala Asp Pro Gly Glu Thr Pro Ser Glu Ala Pro 840 845 850	2657
agt gaa gcg aga acg act cca gca gaa aat ggg gtg aat cac act aca Ser Glu Ala Arg Thr Thr Pro Ala Glu Asn Gly Val Asn His Thr Thr 855 860 865	2705
acc ctg aca ccc aag cca ccc tcc cag gct ctc cac agc cag cca gct Thr Leu Thr Pro Lys Pro Pro Ser Gln Ala Leu His Ser Gln Pro Ala 870 875 880	2753
cca ggt tct gta aag gca cct gcc aaa aca gaa gat ctt att cag agt Pro Gly Ser Val Lys Ala Pro Ala Lys Thr Glu Asp Leu Ile Gln Ser 885 890 895 900	2801
gtc tta aca gaa gtg gaa gca cag acc atc gaa gaa cta aag caa cag Val Leu Thr Glu Val Glu Ala Gln Thr Ile Glu Glu Leu Lys Gln Gln 905 910 915	2849

aaa tcg ttt gtg aaa ctt caa aag aaa cac tac aaa gaa atg aaa gac Lys Ser Phe Val Lys Leu Gln Lys Lys His Tyr Lys Glu Met Lys Asp 920 925 930	2897
ctg gtt aag aga cac cac aag aaa acc act gac ctt atc aaa gaa cac Leu Val Lys Arg His His Lys Lys Thr Thr Asp Leu Ile Lys Glu His 935 940 945	2945
act acc aag tat aat gaa att cag aat gac tac ttg aga agg aga gcc Thr Thr Lys Tyr Asn Glu Ile Gln Asn Asp Tyr Leu Arg Arg Arg Ala 950 955 960	2993
gct ttg gaa aag tcc gcc aaa aag gac agt aag aaa aaa tcg gaa ccc Ala Leu Glu Lys Ser Ala Lys Lys Asp Ser Lys Lys Lys Ser Glu Pro 965 970 975 980	3041
agc agc cct gat cat ggt tca tca acg att gag caa gac ctc gct gct Ser Ser Pro Asp His Gly Ser Ser Thr Ile Glu Gln Asp Leu Ala Ala 985 990 995	3089
ctg gat gct gaa atg acc caa aag tta ata gac ttg aag gac aaa caa Leu Asp Ala Glu Met Thr Gln Lys Leu Ile Asp Leu Lys Asp Lys Gln 1000 1005 1010	3137
cag cag cag ctg ctt aat ctt cgg caa gaa cag tat tat agt gaa aaa Gln Gln Gln Leu Leu Asn Leu Arg Gln Glu Gln Tyr Tyr Ser Glu Lys 1015 1020 1025	3185
tac cag aag cga gaa cat att aaa ctg ctt att caa aag ttg acg gat Tyr Gln Lys Arg Glu His Ile Lys Leu Leu Ile Gln Lys Leu Thr Asp 1030 1035 1040	3233
gtc gca gaa gag tgt cag aac aat cag tta aag aag ctc aaa gaa atc Val Ala Glu Glu Cys Gln Asn Asn Gln Leu Lys Lys Leu Lys Glu Ile 1045 1050 1055 1060	3281
tgt gag aaa gaa aag aaa gaa tta aag aag aaa atg gat aaa aag agg Cys Glu Lys Glu Lys Lys Glu Leu Lys Lys Lys Met Asp Lys Lys Arg 1065 1070 1075	3329
cag gag aag ata aca gaa gct aaa tcc aaa gac aaa agt cag atg gaa Gln Glu Lys Ile Thr Glu Ala Lys Ser Lys Asp Lys Ser Gln Met Glu 1080 1085 1090	3377
gag gag aag aca gag atg atc cgg tca tat atc cag gaa gtg gtg cag Glu Glu Lys Thr Glu Met Ile Arg Ser Tyr Ile Gln Glu Val Val Gln 1095 1100 1105	3425
tat atc aag agg cta gaa gaa gcg caa agt aaa cgg caa gaa aaa ctc Tyr Ile Lys Arg Leu Glu Glu Ala Gln Ser Lys Arg Gln Glu Lys Leu 1110 1115 1120	3473
gta gag aaa cac aag gaa ata cgt cag cag atc ctg gat gaa aag ccc Val Glu Lys His Lys Glu Ile Arg Gln Gln Ile Leu Asp Glu Lys Pro 1125 1130 1135 1140	3521
aag ctg cag gtg gag ctg gag caa gaa tac caa gac aaa ttc aaa aga Lys Leu Gln Val Glu Leu Glu Gln Glu Tyr Gln Asp Lys Phe Lys Arg 1145 1150 1155	3569
ctg ccc ctc gag att ttg gaa ttc gtg cag gaa gcc atg aaa gga aag Leu Pro Leu Glu Ile Leu Glu Phe Val Gln Glu Ala Met Lys Gly Lys 1160 1165 1170	3617

atc agt gaa gac agc aat cac ggt tct gcc cct ctc tcc ctg tcc tca Ile Ser Glu Asp Ser Asn His Gly Ser Ala Pro Leu Ser Leu Ser Ser 1175 1180 1185	3665
gac cct gga aaa gtg aac cac aag act ccc tcc agt gag gag ctg gga Asp Pro Gly Lys Val Asn His Lys Thr Pro Ser Ser Glu Glu Leu Gly 1190 1195 1200	3713
gga gac atc cca gga aaa gaa ttt gat act cct ctg tga atgctcctgc Gly Asp Ile Pro Gly Lys Glu Phe Asp Thr Pro Leu * 1205 1210 1215	3762
caggccttca gaaattgcat ggccactcca gcgtcatcgg actctctctt attacaaaga	3822
tcactgcccc ggaccatctt cccgagaagc atcccttagc ctaaaatcca caccaaaggg	3882
agagttccag aggaatccat gaagaattcc catgcccagg ctccatgtgt catgtggaaa	3942
cctccacagg tctgctagtg aagaatgcat gtatgtgaga tttttgtttt ctttccaata	4002
gcaaattcaa agcaagcaac ttgcaggctc catggaactt ttaatgaagg acagtgtctt	4062
ctttgaagaa aatcaagctc gtgtttttat tcgaagctct ggtgtaaaat atttcaaagt	4122
catagaaata gtttgagaaa tgcatagcat tatttaacac tattgaacag ccgactttga	4182
gcattgtttc ttctaactgc cctcaacta ccattatctt caagtcaaca tgcatattac	4242
attttcatcc tttgctttgc aagcactggg ggcttgaggt ttgctaattt atttatcata	4302
gagtcacaa tgtatttggt gctgacatgg ttttattaga tactgtagtg attcaaataa	4362
gttttctatt tgaaaaaaaa aatcacttga ttgtatcctt gccagtgaa gccatcctaa	4422
gacttagcaa tatggattgt acatttggct gcatgagcaa gtcggccgca cacttccaga	4482
cagtgtgctg tttgaattga ctatttgcac tcaaagtctg ggtattcatt ggttattggc	4542
ctgaaatgat caaataacta caaatgatct gttgaataaa aatagttgag ctgatatatg	4602
ttaagcagat attcaatcag aatgaacagg ttccggtggg tattttgccg tttgacattt	4662
tttatggttc atttattttt aatatagaga ggaagattga atatttatct agagaataca	4722
aagaccacaa tgtaaatgat aggtattatc tccatgtata tatgtaccca cttagtcatg	4782
taagtgcata tacacatata cacacatgag tgtagacatg tgtttattaa ttgacaatga	4842
cccaaactc ttccacaaga cttaaaaacca aattcagga caaatggata gagaagaaaa	4902
gggtcaaaca tcgagattac atggatgtta aattatatgg agacgctaag aaataattga	4962
tggagccatt gatgcaaacc gaagtagatt tagaacttat atgaatttga tttatatttt	5022
gcaagatcaa aaattagatg ttaagtatca gattttaagc ttgttttaatt ggtcaaaaaa	5082
ttaggacaga aataatatgg acatttatta gtatcttcca taatttttaa gtctgacaca	5142
tttctatttt attctaacat aaaaaaactt ccattatata ttactaagt atattttaatt	5202
cacttaactc tgtctttata agttcctatt ttagatggaa taagagaaac aaattatatc	5262
aaggtaaaac tgatcaaaag cataattgaa agttctgaaa aaaaaaaaaa aataatatgt	5322

agaaaaatgt aacttagaga gtaacacatg aacattgaag ttaaaaccca gaagccagat 5382
gctcacagtt ttattttact ttaaaataaa cctgtctgac tgtagctttg cgaaatatct 5442
taaaacgcaa aaaccagttg tgtcctgaaa attgtttcaa gaatttaata tttttatgaa 5502
aattatttta tttaacttta agcaataact agagattaca attaaatfff aatcaaaatg 5562
aaggcttagt tcaaacataa ggaaacagtg tttgattaaa aaaaacacat ctagtaagac 5622
gtaaggggaa aatcacatcc tctttggaga tgattatatt ttgatctgaa gggtttgggg 5682
tgttcattag aactttaata aaacttaact tccaatgaaa aagaaatcct ttgtaaatca 5742
ttctactfff gcactttgaa agaaaggcgt taatcataaa gaagcaagaa tgggtcaaaat 5802
cgaatgctgc atttttataa acaaaattac agactgtctg aaattgaaga agaatgaact 5862
aataatagca ttcataacca aacacaatga tgattattgc agaacattgt atcacatfff 5922
agtccagaga tagaataaag ttgaataacc ttgacttaca caaaactggt ttggtagttg 5982
gatttcatta tcttagtgaa ttttagtcatt ttacaatatg tttgtatttg gccatttact 6042
gtaatcacat ttttatatct gtacaatgac actttttgca gttgtgggggt agtgtgtaac 6102
actgtccatc ttgcatcatt gaaactacta caatgatact atcatttaat aatattaata 6162
ttacttgaaa tagactaaga taaagaaaag gggctctgtat gatgtgcagt tttgtgcctt 6222
tatgtatttg ccttgttctt tgtcgaatgt gtgaaattct gtactgtgggt ttttcctata 6282
atagaaagta gagctgtgta ttaaattaga ctgtgtctct ctgatacctt tacactactg 6342
agaatagcat ggttttggcc atgtaaacca attttcaaag ttctaatagac atagccatgt 6402
gtttttgggt ttttatatff catttttaaaa tttgagtatc accatacatt aattaatact 6462
cctgtagtag ataagctgtc attaagtaat tccccaaaaa agggccatff gcttgcatfa 6522
ctttgaatff aatgttgccg ttgtgcactg tgttaatat ttgtgtgatg gattggacgt 6582
tgtgactcct gccttttaag aagaaaaaaa agataggaca aagtatttga agctcttaaa 6642
atgtacatat tttggttctt ctatctcaaa ttatttaaaa tgcataattc acatttttgt 6702
aataattcta tgcaattttg tggcatgatg tttctccac ttgtaatfff atgtgctttc 6762
atcacaaatc caaaggaaag aataaaaatt tcttaacaca aaaaaaaaaa a 6813

<210> 872
<211> 911
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (357) .. (908)

<400> 872

```

cgtaatgggg ggggggaagg aaaaaatgat ttgcaagctg tacgcctgcc gtaccggtcc      60
ggaattcccg ggtcgacgat ttctgtctgtc tctaaataaa taaataaaaa tattatagca    120
gtatactttg ttctatcaca ttatatgcaa gattattatt aaatcatgta cttgattaca      180
gatctgtcta acttgactag ctcttaagtt ttttggttaa ttgtggatca tgagtttctt     240
gagggcaaag cccatgtcta tctctagcac agtacaatgc ctggaacaca gtacatactt     300
ttcattttctg acttaattaa aaagaagggt cactcagctt ttccctgaat ctttaa      356
atg aaa ttt gat ttt tat tct ttc ttt gat ggt aca gca aag cgt aga      404
Met Lys Phe Asp Phe Tyr Ser Phe Phe Asp Gly Thr Ala Lys Arg Arg
  1             5             10            15

agg ttt tcc tcc aaa cca gtt gta ctc aca gaa gcc cag aaa caa ctt      452
Arg Phe Ser Ser Lys Pro Val Val Leu Thr Glu Ala Gln Lys Gln Leu
             20             25             30

atg ata tgc cac cta cct cag gtt ctc aga ctg cac ctc aaa cga ttc      500
Met Ile Cys His Leu Pro Gln Val Leu Arg Leu His Leu Lys Arg Phe
             35             40             45

agg tgg tca gga cgt aat aac cga gag aag att ggt gtt cat gtt ggc      548
Arg Trp Ser Gly Arg Asn Asn Arg Glu Lys Ile Gly Val His Val Gly
             50             55             60

ttt gag gaa atc tta aac atg gag ccc tat tgc tgc agg gag acc ctg      596
Phe Glu Glu Ile Leu Asn Met Glu Pro Tyr Cys Cys Arg Glu Thr Leu
             65             70             75             80

aaa tcc ctc aga cca gaa tgc ttt atc tat gac ttg tcc gcg gtg gtg      644
Lys Ser Leu Arg Pro Glu Cys Phe Ile Tyr Asp Leu Ser Ala Val Val
             85             90             95

atg cac cat ggg aaa gga ttt ggc tca ggg cac tac act gcc tac tgc      692
Met His His Gly Lys Gly Phe Gly Ser Gly His Tyr Thr Ala Tyr Cys
             100            105            110

tat aat tct gaa gga ggg ttc tgg gta cac tgc aat gat tcc aaa cta      740
Tyr Asn Ser Glu Gly Gly Phe Trp Val His Cys Asn Asp Ser Lys Leu
             115            120            125

agc atg tgc act atg gat gaa gta tgc aag gct caa gct tat atc ttg      788
Ser Met Cys Thr Met Asp Glu Val Cys Lys Ala Gln Ala Tyr Ile Leu
             130            135            140

ttt tat acc caa cga gtt act gag aat gga cat tct aaa ctt ttg cct      836
Phe Tyr Thr Gln Arg Val Thr Glu Asn Gly His Ser Lys Leu Leu Pro
             145            150            155            160

cca gag ctc ctg ttg ggg agc caa cat ccc aat gaa gac gct gat acc      884
Pro Glu Leu Leu Leu Gly Ser Gln His Pro Asn Glu Asp Ala Asp Thr
             165            170            175

tcg tct aat gaa atc ctt agc tga tcc      911
Ser Ser Asn Glu Ile Leu Ser *
             180

```

<211> 603
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (120) .. (527)

<400> 873
 cacacctaca gtatagggaa tttgcgcctt cgaggcaaag aattcggcac gagggtagg 60
 ttccccgttg cgggacagtt tttttttctt ttttaaaaca gacacagcta ctgagtga 119
 atg ccg cct cca cag aaa atc cca agc gtc aga ccc ttc aag cag agg 167
 Met Pro Pro Pro Gln Lys Ile Pro Ser Val Arg Pro Phe Lys Gln Arg
 1 5 10 15
 aaa agc ttg gca atc aga caa gag gaa gtt gct gga atc cgg gca aag 215
 Lys Ser Leu Ala Ile Arg Gln Glu Glu Val Ala Gly Ile Arg Ala Lys
 20 25 30
 ttc ccc aac aaa atc ccg gtg gta gtg gag cgc tac ccc agg gag acg 263
 Phe Pro Asn Lys Ile Pro Val Val Glu Arg Tyr Pro Arg Glu Thr
 35 40 45
 ttc ctg ccc ccg ctg gac aaa acc aag ttc ctg gtc ccg cag gag ctg 311
 Phe Leu Pro Pro Leu Asp Lys Thr Lys Phe Leu Val Pro Gln Glu Leu
 50 55 60
 acc atg acc cag ttc ctc agc atc atc cgg agc cgc atg gtc ctg aga 359
 Thr Met Thr Gln Phe Leu Ser Ile Ile Arg Ser Arg Met Val Leu Arg
 65 70 75 80
 gcc acg gaa gcc ttt tac ttg ctg gtg aac aac aag agc ctg gtc agc 407
 Ala Thr Glu Ala Phe Tyr Leu Leu Val Asn Asn Lys Ser Leu Val Ser
 85 90 95
 atg agc gca acc atg gca gag atc tac aga gac tgc atc cag cca tat 455
 Met Ser Ala Thr Met Ala Glu Ile Tyr Arg Asp Cys Ile Gln Pro Tyr
 100 105 110
 aac cgt att cta aat aag aaa tgg ttg gct tgt gtg atg gtt ttg tgt 503
 Asn Arg Ile Leu Asn Lys Lys Trp Leu Ala Cys Val Met Val Leu Cys
 115 120 125
 aat gag cta gag ata ata ttt taa gtgtcttctg tggtatatgt gggagggcca 557
 Asn Glu Leu Glu Ile Ile Phe *
 130 135
 ttaaggagtg gggtttcactc cctgcatgtg ggcaggtgtc catcta 603

<210> 874
 <211> 1739
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (380) .. (1654)

<400> 874
 agtccggaat tccccgggtcg acccacgcgt ccgcccacgc gtccgataaa aaatgtttgt 60

catctactat tcaagacaat cattatTTTT ctggaaattg tatctgtttt caaggttata	120
tgtaaagtgt taagacaata tcctataaaa tgcattttta ggaagttttg cattactttc	180
ttcctaagtc ttggtaaagt tatataatta gtaccttgaa aaaaataaag tgaaaagcct	240
tttggggact ttagacttta gtgtttaaat gtaattatTT ttatttgttt ttggtttatt	300
ttttatTTTT attttttttg gccgtgggta taatcttcag catctgcaag aaggacgaaa	360
agctcaacaa tatcttgac atg tgc tgg aaa cag atg gat aat agt aaa aag	412
Met Cys Trp Lys Gln Met Asp Asn Ser Lys Lys	
1 5 10	
aag ttt gaa aga gaa tgt aga gag gca gaa aag gca caa cag agt tat	460
Lys Phe Glu Arg Glu Cys Arg Glu Ala Glu Lys Ala Gln Gln Ser Tyr	
15 20 25	
gaa aga ttg gat aat gat act aat gca acc aag gca gat gtt gaa aag	508
Glu Arg Leu Asp Asn Asp Thr Asn Ala Thr Lys Ala Asp Val Glu Lys	
30 35 40	
gcc aaa cag cag ttg aat ctg cgt acg cat atg gcc gat gaa aat aaa	556
Ala Lys Gln Gln Leu Asn Leu Arg Thr His Met Ala Asp Glu Asn Lys	
45 50 55	
aat gaa tat gct gca caa tta caa aac ttt aat gga gaa caa cat aaa	604
Asn Glu Tyr Ala Ala Gln Leu Gln Asn Phe Asn Gly Glu Gln His Lys	
60 65 70 75	
cat ttt tat gta gtg att cct cag att tac aag caa cta caa gaa atg	652
His Phe Tyr Val Val Ile Pro Gln Ile Tyr Lys Gln Leu Gln Glu Met	
80 85 90	
gac gaa cga agg act att aaa ctc agt gag tgt tac aga gga ttt gct	700
Asp Glu Arg Arg Thr Ile Lys Leu Ser Glu Cys Tyr Arg Gly Phe Ala	
95 100 105	
gac tca gaa cgc aaa gtt att ccc atc att tca aaa tgt ttg gaa gga	748
Asp Ser Glu Arg Lys Val Ile Pro Ile Ile Ser Lys Cys Leu Glu Gly	
110 115 120	
atg att ctt gca gca aaa tca gtt gat gaa aga aga gac tct caa atg	796
Met Ile Leu Ala Ala Lys Ser Val Asp Glu Arg Arg Asp Ser Gln Met	
125 130 135	
gtg gta gac tcc ttc aaa tct ggt ttt gaa cct cca gga gac ttt cca	844
Val Val Asp Ser Phe Lys Ser Gly Phe Glu Pro Pro Gly Asp Phe Pro	
140 145 150 155	
ttt gaa gat tac agt caa cat ata tat aga acc att tct gat ggg act	892
Phe Glu Asp Tyr Ser Gln His Ile Tyr Arg Thr Ile Ser Asp Gly Thr	
160 165 170	
atc agt gca tcc aaa cag gag agt ggg aag atg gat gcc aaa acc aca	940
Ile Ser Ala Ser Lys Gln Glu Ser Gly Lys Met Asp Ala Lys Thr Thr	
175 180 185	
gta gga aag gcc aag ggc aaa ttg tgg ctc ttt gga aag aag cca aag	988
Val Gly Lys Ala Lys Gly Lys Leu Trp Leu Phe Gly Lys Lys Pro Lys	
190 195 200	
ggc cca gca cta gaa gat ttc agt cat ctg cca cca gaa cag aga cgt	1036

Gly	Pro	Ala	Leu	Glu	Asp	Phe	Ser	His	Leu	Pro	Pro	Glu	Gln	Arg	Arg		
205						210				215							
aaa	aaa	cta	cag	cag	cgc	att	gat	gaa	ctt	aac	aga	gaa	cta	cag	aaa	1084	
Lys	Lys	Leu	Gln	Gln	Arg	Ile	Asp	Glu	Leu	Asn	Arg	Glu	Leu	Gln	Lys		
220					225					230					235		
gaa	tca	gac	caa	aaa	gat	gca	ctc	aac	aaa	atg	aaa	gat	gta	tat	gag	1132	
Glu	Ser	Asp	Gln	Lys	Asp	Ala	Leu	Asn	Lys	Met	Lys	Asp	Val	Tyr	Glu		
				240					245						250		
aag	aat	cca	caa	atg	ggg	gat	cca	ggg	agt	ttg	cag	cct	aaa	tta	gca	1180	
Lys	Asn	Pro	Gln	Met	Gly	Asp	Pro	Gly	Ser	Leu	Gln	Pro	Lys	Leu	Ala		
			255					260					265				
gag	acc	atg	aat	aac	att	gac	cgc	cta	cga	atg	gaa	atc	cat	aag	aat	1228	
Glu	Thr	Met	Asn	Asn	Ile	Asp	Arg	Leu	Arg	Met	Glu	Ile	His	Lys	Asn		
			270					275					280				
gag	gct	tg	ctc	tct	gaa	gtc	gaa	ggc	aaa	aca	ggg	ggg	aga	gga	gac	1276	
Glu	Ala	Trp	Leu	Ser	Glu	Val	Glu	Gly	Lys	Thr	Gly	Gly	Arg	Gly	Asp		
	285					290						295					
aga	aga	cat	agc	agt	gac	ata	aat	cat	ctt	gta	aca	cag	gga	cga	gaa	1324	
Arg	Arg	His	Ser	Ser	Asp	Ile	Asn	His	Leu	Val	Thr	Gln	Gly	Arg	Glu		
300					305					310					315		
agt	cct	gag	gga	agt	tac	act	gat	gat	gca	aac	cag	gaa	gtc	cgt	ggg	1372	
Ser	Pro	Glu	Gly	Ser	Tyr	Thr	Asp	Asp	Ala	Asn	Gln	Glu	Val	Arg	Gly		
				320					325						330		
cca	ccc	cag	cag	cat	ggg	cac	cac	aat	gag	ttt	gat	gat	gaa	ttt	gag	1420	
Pro	Pro	Gln	Gln	His	Gly	His	His	Asn	Glu	Phe	Asp	Asp	Glu	Phe	Glu		
			335					340					345				
gat	gat	gat	ccc	ttg	cct	gct	att	gga	cac	tgc	aaa	gct	atc	tac	cct	1468	
Asp	Asp	Asp	Pro	Leu	Pro	Ala	Ile	Gly	His	Cys	Lys	Ala	Ile	Tyr	Pro		
			350					355					360				
ttt	gat	gga	cat	aat	gaa	ggg	act	cta	gca	atg	aaa	gaa	ggg	gaa	gtt	1516	
Phe	Asp	Gly	His	Asn	Glu	Gly	Thr	Leu	Ala	Met	Lys	Glu	Gly	Glu	Val		
	365					370					375						
ctc	tac	att	ata	gag	gag	gac	aaa	ggg	gac	gga	tg	aca	aga	gct	cgg	1564	
Leu	Tyr	Ile	Ile	Glu	Glu	Asp	Lys	Gly	Asp	Gly	Trp	Thr	Arg	Ala	Arg		
380						385				390					395		
aga	cag	aac	ggg	gaa	gaa	ggc	tac	gtt	ccc	acg	tca	tac	ata	gat	gta	1612	
Arg	Gln	Asn	Gly	Glu	Glu	Gly	Tyr	Val	Pro	Thr	Ser	Tyr	Ile	Asp	Val		
				400					405						410		
act	cta	gag	aaa	aac	agt	aaa	ggg	gca	gta	act	tat	atc	taa	actaacc		1661	
Thr	Leu	Glu	Lys	Asn	Ser	Lys	Gly	Ala	Val	Thr	Tyr	Ile	*				
			415					420					425				
aggcaccttt	gtg	ccatgtg	tgacatagga	agagtaacat	aaaatgaaaa	cacattcaac										1721	
aggttgaaaa	aaaaaaaa															1739	

<210> 875

<211> 1212

```
<220>
<221> CDS
<222> (333) .. (689)
```

<400>	875	
atttggccct cgaggccaag aattcggcac gagcccagtt ttgtttttat tacaagagta	60	
gttacagggg cagagtaagt gtccccagtt ctcttctctgc taagtgagtt tgtttaagca	120	
tcttaaacac gtggcatgga agaccagaag agaagtggaa tcctcagacc tcaagctttt	180	
tgcaagtgtt ggtgtctgtc cagtccctta tattagtagc tgagccttat tttaatgaac	240	
cgggatatga acggtctaga ggcactccca gtggcacaca gagttctcga gaatatgatg	300	
gaaacattcg acaagcaaca gttaagtggg ca atg cta gaa caa atc aga aac	353	
Met Leu Glu Gln Ile Arg Asn		
1 5		
cct tca cca tgt ttt aaa gag gta ata cac aaa cat ttt tac ttg aaa	401	
Pro Ser Pro Cys Phe Lys Glu Val Ile His Lys His Phe Tyr Leu Lys		
10 15 20		
aga gtt gag ata atg gcc caa tgt gag gag tgg att gcg gat atc cag	449	
Arg Val Glu Ile Met Ala Gln Cys Glu Glu Trp Ile Ala Asp Ile Gln		
25 30 35		
cag tac agc agt gat aag cgg gta ggc agg act atg tct cac cat gca	497	
Gln Tyr Ser Ser Asp Lys Arg Val Gly Arg Thr Met Ser His His Ala		
40 45 50 55		
gca gct ctc aag cgt cac act gct cag ctc cgc gaa gag ttg ctg aaa	545	
Ala Ala Leu Lys Arg His Thr Ala Gln Leu Arg Glu Glu Leu Leu Lys		
60 65 70		
ctt ccc tgc cct gaa ggc ttg gat cct gac act gac gat gcc cca gag	593	
Leu Pro Cys Pro Glu Gly Leu Asp Pro Asp Thr Asp Asp Ala Pro Glu		
75 80 85		
gtg tgc aga gcc aca aca ggt gct gag gag act cta atg cat gat cag	641	
Val Cys Arg Ala Thr Thr Gly Ala Glu Glu Thr Leu Met His Asp Gln		
90 95 100		
gtt aaa ccc agc agc agc aaa gaa ctc ccc agt gac ttc cag tta tga	689	
Val Lys Pro Ser Ser Ser Lys Glu Leu Pro Ser Asp Phe Gln Leu *		
105 110 115		
gctgcattga tgtggacttc atagacacaa aggcttcgaa gcacaagcca aatatgtcaa	749	
tatttgtatg taagaaacta attatgtaat aggtaatgaa actgaaacta tactatgccc	809	
ttaaggagat ccagtttaat tcaaggatgat cttttattta cctgtacagg agtgtaaact	869	
tttttgtgct tttatttttc aattgtgaga accactgatt ggtatgttca acaaatttgt	929	
gtatacaaag aaatggataa atcactgcta tataagggaa actaccttag gaaagaatgt	989	
ttactgaatg tttattttat tttttttttt ttttactata gagtgagggg ttgttaacaa	1049	
agaatatata ttggtcattc ttacaactac tattttaaagt caqcaacttt tcactgaatt	1109	

tgatagattt tatgtttggc catatcttca tgctcacatt tgattttctga agacctccta 1169
 catacacttc aataaaaagt aaatggacat aaaaaaaaaa aaa 1212

<210> 876
 <211> 4092
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (465)..(2636)

<400> 876
 ggattttttc tgaaccagcc aggaaatacc ggaaccacc aaactttaaa caccagccta 60
 aattattcct gttcttttaa gcaggcagca gaaatgacag aaaccggtta acagaaaaaa 120
 aaaaaataat gcttttcatt tgaactcctg tgcattttct ttttaactta tatgtgttcc 180
 taattttcct tactcttttt gtttgtttgt ttcttagtgt ggtttattga caatcattta 240
 caatgccgaa gagtgcgtga gtgagccagc acagtgggta acacagcaac ggagaacaga 300
 tgcaggtttg aggaatttaa cttgctaaaa ccttgaactg aagtcttaga gattggaaca 360
 tacgggtttg tataaatagg cttttaagcc ctgtttgcaa tgggttactg ataggagaaa 420
 cttgcttggt gaatgtcagc tgcgtgagct cactgtcaga caag atg gaa gaa gaa 476
 Met Glu Glu Glu
 1
 ggg ctg gag tgt cca aac tct tcc tct gaa aaa cgc tat ttt cct gaa 524
 Gly Leu Glu Cys Pro Asn Ser Ser Ser Glu Lys Arg Tyr Phe Pro Glu
 5 10 15 20
 tcc ctg gat tcc agc gat ggg gat gag gaa gag gtt ttg gcc tgt gag 572
 Ser Leu Asp Ser Ser Asp Gly Asp Glu Glu Glu Val Leu Ala Cys Glu
 25 30 35
 gat ttg gaa ctt aac ccc ttt gat gga ttg cca tat tca tca cgt tat 620
 Asp Leu Glu Leu Asn Pro Phe Asp Gly Leu Pro Tyr Ser Ser Arg Tyr
 40 45 50
 tat aaa ctt ctg aaa gaa aga gaa gat ctt cct ata tgg aaa gaa aaa 668
 Tyr Lys Leu Leu Lys Glu Arg Glu Asp Leu Pro Ile Trp Lys Glu Lys
 55 60 65
 tac tcc ttt atg gag aac ctg ctt caa aat caa atc gtg att gtt tca 716
 Tyr Ser Phe Met Glu Asn Leu Leu Gln Asn Gln Ile Val Ile Val Ser
 70 75 80
 gga gat gct aaa tgt ggt aag agc gct cag gtt cct cag tgg tgt gct 764
 Gly Asp Ala Lys Cys Gly Lys Ser Ala Gln Val Pro Gln Trp Cys Ala
 85 90 95 100
 gaa tat tgt ctt tcc atc cac tac cag cac ggg ggc gtg ata tgc aca 812
 Glu Tyr Cys Leu Ser Ile His Tyr Gln His Gly Gly Val Ile Cys Thr
 105 110 115
 cag gtc cac aag cag act atg gtc cag ctc gcc ctg cgg gtg gcg gat 860

Gln Val His Lys Gln Thr Met Val Gln Leu Ala Leu Arg Val Ala Asp	
120 125 130	
gaa atg gat gtt aac att ggt cat gag gtt ggc tac gtg atc cct ttc	908
Glu Met Asp Val Asn Ile Gly His Glu Val Gly Tyr Val Ile Pro Phe	
135 140 145	
gag aac tgc tgt acc aac gaa aca atc ctg agg tat tgt act gat gat	956
Glu Asn Cys Cys Thr Asn Glu Thr Ile Leu Arg Tyr Cys Thr Asp Asp	
150 155 160	
atg ctg caa aga gaa atg atg tcc aat cct ttt ttg ggt agc tat ggg	1004
Met Leu Gln Arg Glu Met Met Ser Asn Pro Phe Leu Gly Ser Tyr Gly	
165 170 175 180	
gtc atc atc tta gat gat att cat gaa aga agc att gca acc gat gtg	1052
Val Ile Ile Leu Asp Asp Ile His Glu Arg Ser Ile Ala Thr Asp Val	
185 190 195	
tta ctt gga ctt ctt aaa gat gtt tta cta gca aga cca gaa ctg aag	1100
Leu Leu Gly Leu Leu Lys Asp Val Leu Leu Ala Arg Pro Glu Leu Lys	
200 205 210	
ctc ata att aac tcc tca cct cac ctg atc agc aaa ctc aat tct tat	1148
Leu Ile Ile Asn Ser Ser Pro His Leu Ile Ser Lys Leu Asn Ser Tyr	
215 220 225	
tat gga aac gtg cct gtc ata gaa gtg aaa aat aaa cac cct gtg gag	1196
Tyr Gly Asn Val Pro Val Ile Glu Val Lys Asn Lys His Pro Val Glu	
230 235 240	
gtt gtg tac ctt agt gag gct caa aag gat tct ttt gag tct att tta	1244
Val Val Tyr Leu Ser Glu Ala Gln Lys Asp Ser Phe Glu Ser Ile Leu	
245 250 255 260	
cgc ctt atc ttt gaa att cac cac tcg ggt gag aaa ggt gac att gta	1292
Arg Leu Ile Phe Glu Ile His His Ser Gly Glu Lys Gly Asp Ile Val	
265 270 275	
gtc ttt ctg gcc tgt gaa caa gat att gag aaa gtc tgt gaa act gtc	1340
Val Phe Leu Ala Cys Glu Gln Asp Ile Glu Lys Val Cys Glu Thr Val	
280 285 290	
tat caa gga tct aac cta aac cca gat ctt gga gaa ctg gtg gtt gtt	1388
Tyr Gln Gly Ser Asn Leu Asn Pro Asp Leu Gly Glu Leu Val Val Val	
295 300 305	
cct ttg tat cca aaa gag aaa tgt tca ttg ttc aag cca ctc gat gaa	1436
Pro Leu Tyr Pro Lys Glu Lys Cys Ser Leu Phe Lys Pro Leu Asp Glu	
310 315 320	
aca gaa aaa aga tgc caa gtt tat caa aga aga gtg gtg tta act act	1484
Thr Glu Lys Arg Cys Gln Val Tyr Gln Arg Arg Val Val Leu Thr Thr	
325 330 335 340	
agc tct gga gag ttt ttg atc tgg agc aac tca gtc aga ttt gtt atc	1532
Ser Ser Gly Glu Phe Leu Ile Trp Ser Asn Ser Val Arg Phe Val Ile	
345 350 355	
gat gtg ggt gtg gaa aga aga aag gtg tac aac ccg aga ata aga gca	1580
Asp Val Gly Val Glu Arg Arg Lys Val Tyr Asn Pro Arg Ile Arg Ala	
360 365 370	
aac tcg ctc gtc atg cag ccc atc agc cag agc cag gca gag ata cgc	1628

Asn Ser Leu Val Met Gln Pro Ile Ser Gln Ser Gln Ala Glu Ile Arg	
375 380 385	
aag cag att ctt ggc tca tct tct tca gga aaa ttt ttc tgc ctg tac	1676
Lys Gln Ile Leu Gly Ser Ser Ser Ser Gly Lys Phe Phe Cys Leu Tyr	
390 395 400	
act gaa gaa ttt gcc tcc aaa gac atg acg cca ctg aag cca gca gaa	1724
Thr Glu Glu Phe Ala Ser Lys Asp Met Thr Pro Leu Lys Pro Ala Glu	
405 410 415 420	
atg cag gaa gcc aac cta aca agc atg gtg ctt ttt atg aag agg ata	1772
Met Gln Glu Ala Asn Leu Thr Ser Met Val Leu Phe Met Lys Arg Ile	
425 430 435	
gac att gcg ggc cta ggc cac tgt gac ttc atg aac aga cca gca cca	1820
Asp Ile Ala Gly Leu Gly His Cys Asp Phe Met Asn Arg Pro Ala Pro	
440 445 450	
gaa agt ttg atg cag gca ttg gaa gac tta gat tat ctg gca gca ctg	1868
Glu Ser Leu Met Gln Ala Leu Glu Asp Leu Asp Tyr Leu Ala Ala Leu	
455 460 465	
gat aat gat gga aat ctt tct gaa ttt gga atc atc atg tca gag ttt	1916
Asp Asn Asp Gly Asn Leu Ser Glu Phe Gly Ile Ile Met Ser Glu Phe	
470 475 480	
cct ctt gat cca caa ctc tcg aag tct atc tta gcg tcc tgt gaa ttt	1964
Pro Leu Asp Pro Gln Leu Ser Lys Ser Ile Leu Ala Ser Cys Glu Phe	
485 490 495 500	
gac tgt gta gat gaa gtg cta aca atc gca gcc atg gta aca gct cca	2012
Asp Cys Val Asp Glu Val Leu Thr Ile Ala Ala Met Val Thr Ala Pro	
505 510 515	
aat tgc ttt tca cat gtg cca cat gga gct gaa gag gct gcc ttg act	2060
Asn Cys Phe Ser His Val Pro His Gly Ala Glu Glu Ala Ala Leu Thr	
520 525 530	
tgt tgg aag aca ttt tta cat ccc gaa gga gat cac ttt acc ctc atc	2108
Cys Trp Lys Thr Phe Leu His Pro Glu Gly Asp His Phe Thr Leu Ile	
535 540 545	
agc att tac aag gct tac caa gac aca act ctg aat tct agc agt gag	2156
Ser Ile Tyr Lys Ala Tyr Gln Asp Thr Thr Leu Asn Ser Ser Ser Glu	
550 555 560	
tac tgt gtg gaa aag tgg tgt cgt gat tac ttc ctc aac tgt tca gca	2204
Tyr Cys Val Glu Lys Trp Cys Arg Asp Tyr Phe Leu Asn Cys Ser Ala	
565 570 575 580	
ctc aga atg gca gat gtt att cga gct gaa ctc tta gaa att atc aag	2252
Leu Arg Met Ala Asp Val Ile Arg Ala Glu Leu Leu Glu Ile Ile Lys	
585 590 595	
cga atc gag ctt ccc tat gca gaa cct gct ttt ggc tcc aag gaa aac	2300
Arg Ile Glu Leu Pro Tyr Ala Glu Pro Ala Phe Gly Ser Lys Glu Asn	
600 605 610	
act cta aac ata aag aaa gct ctt ctg tcc ggt tac ttt atg cag att	2348
Thr Leu Asn Ile Lys Lys Ala Leu Leu Ser Gly Tyr Phe Met Gln Ile	
615 620 625	
gct cgg gat gtt gat gga tca ggt aac tac tta atg ctg aca cat aag	2396

[illegible]

atgacctcgt cctcttcata cttttccttg tcaactgtcat catcgtcttc atcctcattt 3956
 tcgaattctt tttcctcttc ctgcgcgcgc tggactgggg gatccggcgg ctgcggaacc 4016
 ccactttcca cggcacgcgc cttaggaaat cgtcgaccgc ggaattccgg accggtacct 4076
 gcaggcgtac cagctt 4092

<210> 877
 <211> 6103
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (238) .. (5331)

<400> 877
 ggctgaggcg gcgcggcgga gccctgagcg gctgtgacag gctacgcaac aggttcgcgg 60
 gcggcgggcct gacgaccaag ccagctgcag tggcggcgac ggccgcagag cagggtctcc 120
 ccgcgcctgc ccgcgcccag gctgccggtg ctgagggacg cggagtcgcg ctgtgacgag 180
 cgggaggcgc ggcgaggcg ccagatggct gagagctagc aaggaaaact caggacc 237
 atg atg gct cag ttt ccc aca gct atg aat gga ggg cca aac atg tgg 285
 Met Met Ala Gln Phe Pro Thr Ala Met Asn Gly Gly Pro Asn Met Trp
 1 5 10 15
 gct att acc tct gaa gaa cgt act aag cat gac agg cag ttt gat aac 333
 Ala Ile Thr Ser Glu Glu Arg Thr Lys His Asp Arg Gln Phe Asp Asn
 20 25 30
 ctc aaa cct tca gga ggt tac ata aca ggt gat caa gca cgt aat ttt 381
 Leu Lys Pro Ser Gly Gly Tyr Ile Thr Gly Asp Gln Ala Arg Asn Phe
 35 40 45
 ttc cta caa tca ggt ctg ccg gcc cct gtt tta gct gaa ata tgg gct 429
 Phe Leu Gln Ser Gly Leu Pro Ala Pro Val Leu Ala Glu Ile Trp Ala
 50 55 60
 tta tca gac cta aac aag gat ggg aag atg gat cag caa gag ttc tcc 477
 Leu Ser Asp Leu Asn Lys Asp Gly Lys Met Asp Gln Gln Glu Phe Ser
 65 70 75 80
 ata gct atg aaa ctc atc aaa ctg aag ctt caa ggc caa cag ttg cct 525
 Ile Ala Met Lys Leu Ile Lys Leu Lys Leu Gln Gly Gln Gln Leu Pro
 85 90 95
 gtg gtt ctc cct cct att atg aag caa ccc cct atg ttt tct cca tta 573
 Val Val Leu Pro Pro Ile Met Lys Gln Pro Pro Met Phe Ser Pro Leu
 100 105 110
 att tct gct cgt ttt gga atg gga agc atg ccc aat ctg tcc att cct 621
 Ile Ser Ala Arg Phe Gly Met Gly Ser Met Pro Asn Leu Ser Ile Pro
 115 120 125
 cag cca ttg cct cca gct gca cct ata aca tca ttg tct tct gcg act 669
 Gln Pro Leu Pro Pro Ala Ala Pro Ile Thr Ser Leu Ser Ser Ala Thr
 130 135 140

tca ggg acc aac ctt cct ccc tta atg atg ccc act ccc cta gtg cct	717
Ser Gly Thr Asn Leu Pro Pro Leu Met Met Pro Thr Pro Leu Val Pro	
145 150 155 160	
tct gtt agc aca tca tca tta cca aat gga acc gcc agt ctc att cag	765
Ser Val Ser Thr Ser Ser Leu Pro Asn Gly Thr Ala Ser Leu Ile Gln	
165 170 175	
cct tta ccc att cct tat tct tct tca aca ttg cct cat ggg tca tct	813
Pro Leu Pro Ile Pro Tyr Ser Ser Ser Thr Leu Pro His Gly Ser Ser	
180 185 190	
tat agt ctg atg atg gga gga ttt gga ggt gct agt ata cag aaa gcg	861
Tyr Ser Leu Met Met Gly Gly Phe Gly Gly Ala Ser Ile Gln Lys Ala	
195 200 205	
cag tct ctg att gat tta gga tct agt agc tca act tcc tcg act gct	909
Gln Ser Leu Ile Asp Leu Gly Ser Ser Ser Ser Thr Ser Ser Thr Ala	
210 215 220	
tca ctc tca ggg aac tca ccc aag act ggg acc tca gag tgg gca gtt	957
Ser Leu Ser Gly Asn Ser Pro Lys Thr Gly Thr Ser Glu Trp Ala Val	
225 230 235 240	
cct cag cct aca aga tta aaa tat cgg caa aaa ttt aat act ctt gac	1005
Pro Gln Pro Thr Arg Leu Lys Tyr Arg Gln Lys Phe Asn Thr Leu Asp	
245 250 255	
aaa agt atg agt gga tat ctc tca ggt ttt caa gct aga aat gcc ctt	1053
Lys Ser Met Ser Gly Tyr Leu Ser Gly Phe Gln Ala Arg Asn Ala Leu	
260 265 270	
ctt cag tca aat ctt tct caa act cag ctg gct act att tgg act ctg	1101
Leu Gln Ser Asn Leu Ser Gln Thr Gln Leu Ala Thr Ile Trp Thr Leu	
275 280 285	
gct gac gtt gat ggt gat gga cag cta aaa gca gaa gag ttt att ctt	1149
Ala Asp Val Asp Gly Asp Gly Gln Leu Lys Ala Glu Glu Phe Ile Leu	
290 295 300	
gca atg cac ctt act gac atg gcc aaa gct gga cag cca tta cca ctg	1197
Ala Met His Leu Thr Asp Met Ala Lys Ala Gly Gln Pro Leu Pro Leu	
305 310 315 320	
act tta cct cct gag ctt gtt cct cca tct ttc aga gga gga aag caa	1245
Thr Leu Pro Pro Glu Leu Val Pro Pro Ser Phe Arg Gly Gly Lys Gln	
325 330 335	
att gat tcc att aat gga act ctg cct tca tat cag aaa atg caa gaa	1293
Ile Asp Ser Ile Asn Gly Thr Leu Pro Ser Tyr Gln Lys Met Gln Glu	
340 345 350	
gag gag cct cag aag aaa tta cca gtt act ttt gag gac aaa cgg aaa	1341
Glu Glu Pro Gln Lys Lys Leu Pro Val Thr Phe Glu Asp Lys Arg Lys	
355 360 365	
gcc aac tat gag cga ggg aac atg gag ctg gaa aag cga cgc caa gcc	1389
Ala Asn Tyr Glu Arg Gly Asn Met Glu Leu Glu Lys Arg Arg Gln Ala	
370 375 380	
ttg atg gag cag caa caa agg gag gca gaa cgt aaa gcc cag aaa gaa	1437
Leu Met Glu Gln Gln Arg Glu Ala Glu Arg Lys Ala Gln Lys Glu	
385 390 395 400	

aag gaa gag tgg gaa cga aaa cag aga gaa tta caa gaa caa gaa tgg Lys Glu Glu Trp Glu Arg Lys Gln Arg Glu Leu Gln Glu Gln Glu Trp 405 410 415	1485
aag aaa caa ctt gaa tta gaa aaa cgc tta gag aag caa cgg gaa ttg Lys Lys Gln Leu Glu Leu Glu Lys Arg Leu Glu Lys Gln Arg Glu Leu 420 425 430	1533
gag aga caa cga gag gaa gaa agg aga aaa gac ata gaa aga cga gag Glu Arg Gln Arg Glu Glu Glu Arg Arg Lys Asp Ile Glu Arg Arg Glu 435 440 445	1581
gca gca aaa cag gaa ctt gaa cga caa cgt cgc tta gaa tgg gag aga Ala Ala Lys Gln Glu Leu Glu Arg Gln Arg Arg Leu Glu Trp Glu Arg 450 455 460	1629
att cgg cga cag gag ctt ctc aat caa aag aat aga gaa caa gaa gaa Ile Arg Arg Gln Glu Leu Leu Asn Gln Lys Asn Arg Glu Gln Glu Glu 465 470 475 480	1677
att gtc agg tta aac tct aaa aag aag aat ctt cat ctt gag ttg gaa Ile Val Arg Leu Asn Ser Lys Lys Lys Asn Leu His Leu Glu Leu Glu 485 490 495	1725
gca ctg aat ggc aaa cat cag cag atc tca ggc aga ctt cag gat gtc Ala Leu Asn Gly Lys His Gln Gln Ile Ser Gly Arg Leu Gln Asp Val 500 505 510	1773
cga ctc aaa aag caa act caa aag act gag ctg gaa gtt ctg gat aag Arg Leu Lys Lys Gln Thr Gln Lys Thr Glu Leu Glu Val Leu Asp Lys 515 520 525	1821
cag tgt gac ttg gaa att atg gaa atc aag caa ctt caa cag gaa ctt Gln Cys Asp Leu Glu Ile Met Glu Ile Lys Gln Leu Gln Gln Glu Leu 530 535 540	1869
cag gaa tat cag aat aag ctt atc tat ctg gta cct gag aag caa tta Gln Glu Tyr Gln Asn Lys Leu Ile Tyr Leu Val Pro Glu Lys Gln Leu 545 550 555 560	1917
tta aat gaa aga att aaa aac atg cag ttc agt aac aca cct gat tca Leu Asn Glu Arg Ile Lys Asn Met Gln Phe Ser Asn Thr Pro Asp Ser 565 570 575	1965
ggg gtc agt tta ctt cat aaa aaa tca tta gaa aag gaa gaa tta tgc Gly Val Ser Leu Leu His Lys Lys Ser Leu Glu Lys Glu Glu Leu Cys 580 585 590	2013
caa aga ctt aaa gaa cag tta gat gct ctt gaa aaa gaa act gca tct Gln Arg Leu Lys Glu Gln Leu Asp Ala Leu Glu Lys Glu Thr Ala Ser 595 600 605	2061
aag ctg tca gaa atg gat tct ttt aac aat caa cta aag tgt ggg aat Lys Leu Ser Glu Met Asp Ser Phe Asn Asn Gln Leu Lys Cys Gly Asn 610 615 620	2109
atg gat gac tct gtt ctt cag tgc ctt ttg tct ctg cta agc tgt ctc Met Asp Asp Ser Val Leu Gln Cys Leu Leu Ser Leu Leu Ser Cys Leu 625 630 635 640	2157
aac aac ctc ttc ctc tta ctt aag gaa ctg aga gaa acc tac aac aca Asn Asn Leu Phe Leu Leu Lys Glu Leu Arg Glu Thr Tyr Asn Thr 645 650 655	2205

cag cag tta gcc ctt gaa cag ctt tat aag atc aaa cgt gac aag ttg Gln Gln Leu Ala Leu Glu Gln Leu Tyr Lys Ile Lys Arg Asp Lys Leu 660 665 670	2253
aag gaa att gaa agg aaa aga tta gaa cta atg cag aaa aag aaa cta Lys Glu Ile Glu Arg Lys Arg Leu Glu Leu Met Gln Lys Lys Lys Leu 675 680 685	2301
gaa gat gag gct gca agg aaa gca aag caa gga aaa gaa aac tta tgg Glu Asp Glu Ala Ala Arg Lys Ala Lys Gln Gly Lys Glu Asn Leu Trp 690 695 700	2349
aaa gaa aat ctt aga aag gag gaa gaa gaa aaa caa aag cga ctc cag Lys Glu Asn Leu Arg Lys Glu Glu Glu Glu Lys Gln Lys Arg Leu Gln 705 710 715 720	2397
gaa gaa aaa aca caa gaa aaa att caa gaa gag gaa cgg aaa gct gag Glu Glu Lys Thr Gln Glu Lys Ile Gln Glu Glu Glu Arg Lys Ala Glu 725 730 735	2445
gag aaa caa cgt aag gat aag gat act ttg aaa gct gag gag aaa aaa Glu Lys Gln Arg Lys Asp Lys Asp Thr Leu Lys Ala Glu Glu Lys Lys 740 745 750	2493
cgt gag aca gct agt gtt ttg gtg aat tat aga gca tta tac ccc ttt Arg Glu Thr Ala Ser Val Leu Val Asn Tyr Arg Ala Leu Tyr Pro Phe 755 760 765	2541
gaa gca agg aac cat gat gag atg agt ttt aat tct gga gat ata att Glu Ala Arg Asn His Asp Glu Met Ser Phe Asn Ser Gly Asp Ile Ile 770 775 780	2589
cag gtt gat gaa aaa acc gta gga gaa cct ggt tgg ctt tat ggt agt Gln Val Asp Glu Lys Thr Val Gly Glu Pro Gly Trp Leu Tyr Gly Ser 785 790 795 800	2637
ttt caa gga aat ttt ggc tgg ttt cca tgc aat tat gta gaa aaa atg Phe Gln Gly Asn Phe Gly Trp Phe Pro Cys Asn Tyr Val Glu Lys Met 805 810 815	2685
cca tca agt gaa aat gaa aaa gct gta tct cca aag aag gcc tta ctt Pro Ser Ser Glu Asn Glu Lys Ala Val Ser Pro Lys Lys Ala Leu Leu 820 825 830	2733
cct cct aca gtt tct tta tct gct acc tca act tcc tct gaa cca ctt Pro Pro Thr Val Ser Leu Ser Ala Thr Ser Thr Ser Ser Glu Pro Leu 835 840 845	2781
tct tca aat caa cca gca tca gtg act gat tat caa aat gta tct ttt Ser Ser Asn Gln Pro Ala Ser Val Thr Asp Tyr Gln Asn Val Ser Phe 850 855 860	2829
tca aac cta act gta aat aca tca tgg cag aaa aaa tca gcc ttc act Ser Asn Leu Thr Val Asn Thr Ser Trp Gln Lys Lys Ser Ala Phe Thr 865 870 875 880	2877
cga act gtg tcc cct gga tct gta tca cct att cat gga cag gga caa Arg Thr Val Ser Pro Gly Ser Val Ser Pro Ile His Gly Gln Gly Gln 885 890 895	2925
gtg gta gaa aac tta aaa gca cag gcc ctt tgt tcc tgg act gca aag Val Val Glu Asn Leu Lys Ala Gln Ala Leu Cys Ser Trp Thr Ala Lys 900 905 910	2973

aaa gat aac cac ttg aac ttc tca aaa cat gac att att act gtc ttg Lys Asp Asn His Leu Asn Phe Ser Lys His Asp Ile Ile Thr Val Leu 915 920 925	3021
gag cag caa gaa aat tgg tgg ttt ggg gag gtg cat gga gga aga gga Glu Gln Gln Glu Asn Trp Trp Phe Gly Glu Val His Gly Gly Arg Gly 930 935 940	3069
tgg ttt ccc aaa tct tat gtc aag atc att cct ggg agt gaa gta aaa Trp Phe Pro Lys Ser Tyr Val Lys Ile Ile Pro Gly Ser Glu Val Lys 945 950 955 960	3117
cgg gaa gaa cca gaa gct ttg tat gca gct gta aat aag aaa cct acc Arg Glu Glu Pro Glu Ala Leu Tyr Ala Val Asn Lys Lys Pro Thr 965 970 975	3165
tcg gca gcc tat tca gtt gga gaa gaa tat att gca ctt tat cca tat Ser Ala Ala Tyr Ser Val Gly Glu Glu Tyr Ile Ala Leu Tyr Pro Tyr 980 985 990	3213
tca agt gtg gaa cct gga gat ttg act ttc aca gaa ggt gaa gaa ata Ser Ser Val Glu Pro Gly Asp Leu Thr Phe Thr Glu Gly Glu Glu Ile 995 1000 1005	3261
ttg gtg acc cag aaa gat gga gag tgg tgg aca gga agt att gga gat Leu Val Thr Gln Lys Asp Gly Glu Trp Trp Thr Gly Ser Ile Gly Asp 1010 1015 1020	3309
aga agt gga att ttt cca tca aac tat gtc aaa cca aag gat caa gag Arg Ser Gly Ile Phe Pro Ser Asn Tyr Val Lys Pro Lys Asp Gln Glu 1025 1030 1035 1040	3357
agt ttt ggg agt gct agc aag tct gga gca tca aat aaa aaa cct gag Ser Phe Gly Ser Ala Ser Lys Ser Gly Ala Ser Asn Lys Lys Pro Glu 1045 1050 1055	3405
att gct cag gta act tca gca tat gtt gct tct ggt tct gaa caa ctt Ile Ala Gln Val Thr Ser Ala Tyr Val Ala Ser Gly Ser Glu Gln Leu 1060 1065 1070	3453
agc ctt gca cca gga cag tta ata tta att cta aag aaa aat aca agt Ser Leu Ala Pro Gly Gln Leu Ile Leu Ile Leu Lys Lys Asn Thr Ser 1075 1080 1085	3501
ggg tgg tgg caa gga gag tta cag gcc aga gga aaa aag cga cag aaa Gly Trp Trp Gln Gly Glu Leu Gln Ala Arg Gly Lys Lys Arg Gln Lys 1090 1095 1100	3549
gga tgg ttt cct gcc agt cat gtt aaa ctt ttg ggt cca agt agt gaa Gly Trp Phe Pro Ala Ser His Val Lys Leu Leu Gly Pro Ser Ser Glu 1105 1110 1115 1120	3597
aga gcc aca cct gcc ttt cat cct gta tgt cag gtg att gct atg tat Arg Ala Thr Pro Ala Phe His Pro Val Cys Gln Val Ile Ala Met Tyr 1125 1130 1135	3645
gac tat gca gca aat aat gaa gat gag ctc agt ttc tcc aag gga caa Asp Tyr Ala Ala Asn Asn Glu Asp Glu Leu Ser Phe Ser Lys Gly Gln 1140 1145 1150	3693
ctc att aat gtt atg aac aaa gat gat cct gat tgg tgg caa gga gag Leu Ile Asn Val Met Asn Lys Asp Asp Pro Asp Trp Trp Gln Gly Glu 1155 1160 1165	3741

atc aac ggg gtg act ggt ctc ttt cct tca aac tac gtt aag atg acg Ile Asn Gly Val Thr Gly Leu Phe Pro Ser Asn Tyr Val Lys Met Thr 1170 1175 1180	3789
aca gac tca gat cca agt caa cag tgg tgt gct gat ctg caa acc ctg Thr Asp Ser Asp Pro Ser Gln Gln Trp Cys Ala Asp Leu Gln Thr Leu 1185 1190 1195 1200	3837
gac aca atg cag cca att gag agg aaa aga cag ggc tat att cat gag Asp Thr Met Gln Pro Ile Glu Arg Lys Arg Gln Gly Tyr Ile His Glu 1205 1210 1215	3885
ctg att cag acc gaa gag cgg tac atg gct gac ctt cag ctc gtc gtc Leu Ile Gln Thr Glu Glu Arg Tyr Met Ala Asp Leu Gln Leu Val Val 1220 1225 1230	3933
gag gtt ttt cag aaa cgc atg gca gag tca ggc ttt ctc act gaa ggg Glu Val Phe Gln Lys Arg Met Ala Glu Ser Gly Phe Leu Thr Glu Gly 1235 1240 1245	3981
gag atg gcc ctg att ttt gtt aac tgg aag gag ctc atc atg tcc aac Glu Met Ala Leu Ile Phe Val Asn Trp Lys Glu Leu Ile Met Ser Asn 1250 1255 1260	4029
aca aag ctg ctg aag gct ttg cgg gtg cgg aag aag acc ggg ggc gag Thr Lys Leu Leu Lys Ala Leu Arg Val Arg Lys Lys Thr Gly Gly Glu 1265 1270 1275 1280	4077
aag atg ccg gtg cag atg att ggg gac atc ctg gcc gct gag ctg tcc Lys Met Pro Val Gln Met Ile Gly Asp Ile Leu Ala Ala Glu Leu Ser 1285 1290 1295	4125
cac atg cag gct tac atc agg ttc tgc agc tgc cag ctt aat gga gca His Met Gln Ala Tyr Ile Arg Phe Cys Ser Cys Gln Leu Asn Gly Ala 1300 1305 1310	4173
gct ctg tta cag cag aag aca gat gaa gac aca gat ttc aaa gaa ttt Ala Leu Leu Gln Gln Lys Thr Asp Glu Asp Thr Asp Phe Lys Glu Phe 1315 1320 1325	4221
tta aag aag ctg gca tct gac ccg cgg tgt aaa gga atg ccc ctc tcc Leu Lys Lys Leu Ala Ser Asp Pro Arg Cys Lys Gly Met Pro Leu Ser 1330 1335 1340	4269
agc ttc ctg ctg aaa ccc atg cag agg atc acc cgc tac cca ctg ctc Ser Phe Leu Leu Lys Pro Met Gln Arg Ile Thr Arg Tyr Pro Leu Leu 1345 1350 1355 1360	4317
atc aga agt att ctg gag aac acc ccg gag agc cat gca gac cat tcc Ile Arg Ser Ile Leu Glu Asn Thr Pro Glu Ser His Ala Asp His Ser 1365 1370 1375	4365
tcc cta aag ctg gcc ctc gag cgg gca gag gag ctg tgc tct caa gtg Ser Leu Lys Leu Ala Leu Glu Arg Ala Glu Glu Leu Cys Ser Gln Val 1380 1385 1390	4413
aat gag gga gtt cgg gag aag gaa aac tcg gac cga ctg gag tgg atc Asn Glu Gly Val Arg Glu Lys Glu Asn Ser Asp Arg Leu Glu Trp Ile 1395 1400 1405	4461
cag gcg cac gtg cag tgt gaa ggc ctc gcg gag caa ctt att ttc aac Gln Ala His Val Gln Cys Glu Gly Leu Ala Glu Gln Leu Ile Phe Asn 1410 1415 1420	4509

tct ctc acc aac tgc ctg ggg ccc cgg aag ctc tta cac agt ggg aaa	4557
Ser Leu Thr Asn Cys Leu Gly Pro Arg Lys Leu Leu His Ser Gly Lys	
1425 1430 1435 1440	
tta tac aag acc aag agc aac aag gaa ctg cac gga ttc ctc ttc aat	4605
Leu Tyr Lys Thr Lys Ser Asn Lys Glu Leu His Gly Phe Leu Phe Asn	
1445 1450 1455	
gac ttc ctg ctt ctt acc tac atg gtc aag cag ttt gct gtt tcc tct	4653
Asp Phe Leu Leu Leu Thr Tyr Met Val Lys Gln Phe Ala Val Ser Ser	
1460 1465 1470	
ggc tct gag aaa ctt ttc agc tcg aag tcc aat gct caa ttc aaa atg	4701
Gly Ser Glu Lys Leu Phe Ser Ser Lys Ser Asn Ala Gln Phe Lys Met	
1475 1480 1485	
tat aaa acg ccc att ttc ctg aat gaa gtc ttg gtg aaa ctg ccc aca	4749
Tyr Lys Thr Pro Ile Phe Leu Asn Glu Val Leu Val Lys Leu Pro Thr	
1490 1495 1500	
gac cct tcc agc gat gag cct gtc ttc cac att tcc cac att gat cgg	4797
Asp Pro Ser Ser Asp Glu Pro Val Phe His Ile Ser His Ile Asp Arg	
1505 1510 1515 1520	
gtc tac acc ctc cga aca gac aac att aat gag agg acc acc tgg gtg	4845
Val Tyr Thr Leu Arg Thr Asp Asn Ile Asn Glu Arg Thr Thr Trp Val	
1525 1530 1535	
cag aag atc aag gcg gcg tct gag cag tac atc gac acc gag aag aag	4893
Gln Lys Ile Lys Ala Ala Ser Glu Gln Tyr Ile Asp Thr Glu Lys Lys	
1540 1545 1550	
aag cgt gag aaa gct tac caa gcc cgc tcc caa aag act tca ggc att	4941
Lys Arg Glu Lys Ala Tyr Gln Ala Arg Ser Gln Lys Thr Ser Gly Ile	
1555 1560 1565	
ggg cgc ctg atg gtg cat gtc att gaa gct aca gaa tta aaa gcc tgc	4989
Gly Arg Leu Met Val His Val Ile Glu Ala Thr Glu Leu Lys Ala Cys	
1570 1575 1580	
aaa cca aat gga aag agc aac cca tac tgt gaa atc agc atg ggc tcc	5037
Lys Pro Asn Gly Lys Ser Asn Pro Tyr Cys Glu Ile Ser Met Gly Ser	
1585 1590 1595 1600	
cag agc tac acc acc agg acc atc cag gac aca ctc aat ccc aag tgg	5085
Gln Ser Tyr Thr Thr Arg Thr Ile Gln Asp Thr Leu Asn Pro Lys Trp	
1605 1610 1615	
aat ttt aac tgc cag ttc ttt att aag gat ctc tac caa gac gtg ctg	5133
Asn Phe Asn Cys Gln Phe Phe Ile Lys Asp Leu Tyr Gln Asp Val Leu	
1620 1625 1630	
tgt ctc acc ctg ttt gac aga gac cag ttt tca cca gat gat ttc ctg	5181
Cys Leu Thr Leu Phe Asp Arg Asp Gln Phe Ser Pro Asp Asp Phe Leu	
1635 1640 1645	
ggt cgt act gaa att cca gtg gca aaa att cga aca gaa cag gaa agc	5229
Gly Arg Thr Glu Ile Pro Val Ala Lys Ile Arg Thr Glu Gln Glu Ser	
1650 1655 1660	
aaa ggc cct atg acc cgc cga ctg ctg ctg cat gag gtc ccc acc ggg	5277
Lys Gly Pro Met Thr Arg Arg Leu Leu Leu His Glu Val Pro Thr Gly	
1665 1670 1675 1680	

gag gtc tgg gtc cgt ttt gac ctg cag ctt ttt gag caa aaa act ctc 5325
 Glu Val Trp Val Arg Phe Asp Leu Gln Leu Phe Glu Gln Lys Thr Leu
 1685 1690 1695
 ctg tag gggttctaaa ggacagcacc agcgggacag cccacaaggc tggggctgga 5381
 Leu *
 gaatgagaga ctgcgctctc ttggggctga gggagcacca tgcagcttca cccctcacia 5441
 agccatgcac gctgggggct ctgttttctc gcacactaaa tagctagcaa tctatgcaaa 5501
 cacctttccc ataaagaaac caaaccccat agtacagtgc cttgtcctag tgttcacatg 5561
 ttcagctctg tttgtttaga tgccaagggt tccattttca gggctataaa aagtattact 5621
 tggaaatgag gcatcagacc accagatggt accgctcggg tgaatgtgtc caccgtggag 5681
 tggtttggtg acgctgtaac cattccacgc cagtgcctc tgctgggtca cagccactca 5741
 ggaggggaag ggtcaggatg agaggctgca gcctcgacac ttggcgcggc ctgatactga 5801
 aatagcgtct actcgtgcac tgaataaaaa cagaaacttg atcattttat tccgtattag 5861
 attttatcac tctctgctaa gacaatatag tctggagtat aagtgggaaa gcttgattta 5921
 aatactgtga actctaataa tgtggaaaat atttttcaac ttaattttc tgaagtataa 5981
 attatttatg taaattcatt gtttttgcac atttcttagg acatgcatct ttaagcttta 6041
 tcattgccca tatgtacaga aagagaataa agacatatgt ttatggatgg aaaaaaaaaa 6101
 aa 6103

<210> 878
 <211> 1668
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (95)..(1432)

<400> 878
 atttggccct cgaggccaag aattcggcac gagacactct tcagcgacca cgcaggcact 60
 ttcccggtcc ccagtatacc ataattgaag aaaa atg atg gaa gag agt gga 112
 Met Met Glu Glu Ser Gly
 1 5
 ata gag aca aca cca cct ggg act cct cca cca aat cct gca ggg ctg 160
 Ile Glu Thr Thr Pro Pro Gly Thr Pro Pro Asn Pro Ala Gly Leu
 10 15 20
 gct gct act gct atg tct tct acc cct gtt cca tta gcg gca acc agt 208
 Ala Ala Thr Ala Met Ser Ser Thr Pro Val Pro Leu Ala Ala Thr Ser
 25 30 35
 tct ttt tct tct cca aat gta tcc tcc atg gag tcc ttc cca cca ctc 256
 Ser Phe Ser Ser Pro Asn Val Ser Ser Met Glu Ser Phe Pro Pro Leu

40	45	50	
gca tac tct act cct cag ccg ccc ctt cct cct gtg agg cct tca gca Ala Tyr Ser Thr Pro Gln Pro Pro Leu Pro Pro Val Arg Pro Ser Ala 55 60 65 70			304
cca tta cct ttt gtg cct cct cct gca gtt cct tct gtc cca cca ctt Pro Leu Pro Phe Val Pro Pro Pro Ala Val Pro Ser Val Pro Pro Leu 75 80 85			352
gtt act tct atg cca cct cct gtt tct cca tca act gct gct gcc ttc Val Thr Ser Met Pro Pro Pro Val Ser Pro Ser Thr Ala Ala Ala Phe 90 95 100			400
ggc aat cct cct gta tct cac ttc cca cct tca act tct gcc cca aac Gly Asn Pro Pro Val Ser His Phe Pro Pro Ser Thr Ser Ala Pro Asn 105 110 115			448
act ctt tta cct gca ccc cct tog ggt cct cct ata tca gga ttt tct Thr Leu Leu Pro Ala Pro Pro Ser Gly Pro Pro Ile Ser Gly Phe Ser 120 125 130			496
gtt ggt tca act tat gac att aca agg gga cat gct ggg aga gct ccc Val Gly Ser Thr Tyr Asp Ile Thr Arg Gly His Ala Gly Arg Ala Pro 135 140 145 150			544
cag aca ccc ctg atg cca tca ttt tct gca cct tca gga aca ggt ctt Gln Thr Pro Leu Met Pro Ser Phe Ser Ala Pro Ser Gly Thr Gly Leu 155 160 165			592
ttg cca act cct att act cag caa gcc agt ttg aca tct ctg gca cag Leu Pro Thr Pro Ile Thr Gln Gln Ala Ser Leu Thr Ser Leu Ala Gln 170 175 180			640
gga act gga acc aca tca gcc att act ttc cca gag gag caa gaa gac Gly Thr Gly Thr Thr Ser Ala Ile Thr Phe Pro Glu Glu Gln Glu Asp 185 190 195			688
cct aga att act aga ggt cag gat gaa gca tct gct ggt gga atc tgg Pro Arg Ile Thr Arg Gly Gln Asp Glu Ala Ser Ala Gly Gly Ile Trp 200 205 210			736
ggc ttt att aag ggt gtg gct ggg aat cct atg gtg aag tct gtg ctt Gly Phe Ile Lys Gly Val Ala Gly Asn Pro Met Val Lys Ser Val Leu 215 220 225 230			784
gat aag aca aaa cat tca gta gaa agc atg att aca acg ctg gac cct Asp Lys Thr Lys His Ser Val Glu Ser Met Ile Thr Thr Leu Asp Pro 235 240 245			832
ggc atg gct ccc tat atc aaa tct gga ggt gaa ctg gat att gta gtg Gly Met Ala Pro Tyr Ile Lys Ser Gly Gly Glu Leu Asp Ile Val Val 250 255 260			880
acc tca aat aaa gaa gta aaa gtt gct gct gtc cga gat gcc ttc cag Thr Ser Asn Lys Glu Val Lys Val Ala Ala Val Arg Asp Ala Phe Gln 265 270 275			928
gag gtc ttt ggc tta gct gtg gtt gta ggg gaa gct gga cag tcc aat Glu Val Phe Gly Leu Ala Val Val Val Gly Glu Ala Gly Gln Ser Asn 280 285 290			976
att gcc cca caa cca gtg ggc tat gca gct gga tta aaa ggt gct cag Ile Ala Pro Gln Pro Val Gly Tyr Ala Ala Gly Leu Lys Gly Ala Gln			1024

295	300	305	310	
gaa cgg ata gat agc ttg cgt cga act ggg gtg atc cat gaa aaa cag				1072
Glu Arg Ile Asp Ser Leu Arg Arg Thr Gly Val Ile His Glu Lys Gln				
	315	320	325	
aca gct gtg tca gta gaa aac ttc att gca gaa ttg ctg cct gac aaa				1120
Thr Ala Val Ser Val Glu Asn Phe Ile Ala Glu Leu Leu Pro Asp Lys				
	330	335	340	
tgg ttt gac att ggt tgt ttg gtg gtt gaa gat cct gtc cat ggc att				1168
Trp Phe Asp Ile Gly Cys Leu Val Val Glu Asp Pro Val His Gly Ile				
	345	350	355	
cat cta gaa aca ttt aca caa gcc aca cca gtg cct ttg gaa ttt gta				1216
His Leu Glu Thr Phe Thr Gln Ala Thr Pro Val Pro Leu Glu Phe Val				
	360	365	370	
cag cag gct caa agt cta act ccc cag gac tat aat ctg agg tgg tca				1264
Gln Gln Ala Gln Ser Leu Thr Pro Gln Asp Tyr Asn Leu Arg Trp Ser				
	375	380	385	390
ggc ctt ttg gtg aca gtg ggt gaa gtc ctg gaa aag agt tta ctg aat				1312
Gly Leu Leu Val Thr Val Gly Glu Val Leu Glu Lys Ser Leu Leu Asn				
	395	400	405	
gtc agc cgg act gat tgg cac atg gca ttt act ggg atg tcc cgt cgg				1360
Val Ser Arg Thr Asp Trp His Met Ala Phe Thr Gly Met Ser Arg Arg				
	410	415	420	
cag atg atc tac agt gca gcc aga gcg ata gca ggc atg tat aaa cag				1408
Gln Met Ile Tyr Ser Ala Ala Arg Ala Ile Ala Gly Met Tyr Lys Gln				
	425	430	435	
cgc ctg cca ccc agg aca gtg tga gaggagacct acctgggaga ctgagacttt				1462
Arg Leu Pro Pro Arg Thr Val *				
	440	445		
ccccacttt tagcttgatg ttaaagaagt ggttgtagctt tcctaaatcg aatagtctaa				1522
atgaatccag tagtttttat cattttcctg tagcctgcaa tttttctttc tctagaaagg				1582
catcatgtca ttccaggaga caaaaagaaa caaatccttt ttatagtcac accatttcac				1642
ctatcatagt actcaaaaaa aaaaaa				1668

<210> 879
 <211> 1350
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(1056)

<400> 879	
atg gca ctc ccc ttt caa aaa gag ctg gag aaa tac aag aac att gat	48
Met Ala Leu Pro Phe Gln Lys Glu Leu Glu Lys Tyr Lys Asn Ile Asp	
1 5 10 15	
gaa gat gag ctt ctt ggc aaa ctc tca gaa gag gaa ctg aaa cag ttg	96

Glu Asp Glu Leu Leu Gly Lys Leu Ser Glu Glu Glu Leu Lys Gln Leu	
20 25 30	
gaa aat gtt cta gat gac cta gat cct gag agt gcc atg ctg cca gct	144
Glu Asn Val Leu Asp Asp Leu Asp Pro Glu Ser Ala Met Leu Pro Ala	
35 40 45	
gga ttt cga cag aaa gac cag aca cag aag gca gcc acc ggc ccc ttt	192
Gly Phe Arg Gln Lys Asp Gln Thr Gln Lys Ala Ala Thr Gly Pro Phe	
50 55 60	
gac cgc gag cac ctc ctc atg tac ctg gag aag gag gct ttg gaa cag	240
Asp Arg Glu His Leu Leu Met Tyr Leu Glu Lys Glu Ala Leu Glu Gln	
65 70 75 80	
aaa gac aga gag gac ttt gtg ccc ttc act gga gaa aag aaa ggg aga	288
Lys Asp Arg Glu Asp Phe Val Pro Phe Thr Gly Glu Lys Lys Gly Arg	
85 90 95	
gtc ttt atc cct aaa gaa aag cct ata gaa act cgt aaa gaa gaa aaa	336
Val Phe Ile Pro Lys Glu Lys Pro Ile Glu Thr Arg Lys Glu Glu Lys	
100 105 110	
gtg acc ctt gac cca gaa ctg gaa gaa gct ttg gcc agt gcc tct gac	384
Val Thr Leu Asp Pro Glu Leu Glu Glu Ala Leu Ala Ser Ala Ser Asp	
115 120 125	
acc gaa ctc tat gat ctt gca gct gtc ctt gga gta cac aat ttg ctc	432
Thr Glu Leu Tyr Asp Leu Ala Ala Val Leu Gly Val His Asn Leu Leu	
130 135 140	
aac aat cca aag ttc gat gaa gaa aca gcc aac aat aaa ggt ggc aaa	480
Asn Asn Pro Lys Phe Asp Glu Glu Thr Ala Asn Asn Lys Gly Gly Lys	
145 150 155 160	
gga cct gtc aga aat gtt gtc aaa ggt gaa aaa gta aag cca gta ttt	528
Gly Pro Val Arg Asn Val Val Lys Gly Glu Lys Val Lys Pro Val Phe	
165 170 175	
gag gaa cca cca aat ccc aca aat gtg gaa ata agc ctg cag cag atg	576
Glu Glu Pro Pro Asn Pro Thr Asn Val Glu Ile Ser Leu Gln Gln Met	
180 185 190	
aaa gcc aat gat cct agc ttg caa gaa gtc aac ctc aac aac att aag	624
Lys Ala Asn Asp Pro Ser Leu Gln Glu Val Asn Leu Asn Asn Ile Lys	
195 200 205	
aac att cca att cca acc ctg agg gaa ttt gca aag gct ctg gag acc	672
Asn Ile Pro Ile Pro Thr Leu Arg Glu Phe Ala Lys Ala Leu Glu Thr	
210 215 220	
aac act cac gtg aag aag ttc agc ctg gcc gca act cgc agc aat gac	720
Asn Thr His Val Lys Lys Phe Ser Leu Ala Ala Thr Arg Ser Asn Asp	
225 230 235 240	
cct gtg gcc att gct ttt gca gac atg ctg aaa gta aac aag acc ttg	768
Pro Val Ala Ile Ala Phe Ala Asp Met Leu Lys Val Asn Lys Thr Leu	
245 250 255	
aca agt cta aac ata gaa tcc aat ttt atc act gga act ggg atc ctg	816
Thr Ser Leu Asn Ile Glu Ser Asn Phe Ile Thr Gly Thr Gly Ile Leu	
260 265 270	
gcc ctg gta gag gca ctg aaa gaa aat gac acc ttg aca gaa atc aag	864

Ala Leu Val	Glu Ala Leu Lys	Glu Asn Asp Thr Leu Thr	Glu Ile Lys	
275		280	285	
att gac aac cag agg cag cag ttg gga aca gct gta gag atg gaa att				912
Ile Asp Asn Gln Arg Gln Gln Leu Gly Thr Ala Val Glu Met Glu Ile				
290	295	300		
gcc cag atg ctg gag gag aat tca agg atc ctc aag ttt gga tac cag				960
Ala Gln Met Leu Glu Glu Asn Ser Arg Ile Leu Lys Phe Gly Tyr Gln				
305	310	315	320	
ttt acc aag caa ggg cca cga aca agg gtg gca gct gcc atc aca aag				1008
Phe Thr Lys Gln Gly Pro Arg Thr Arg Val Ala Ala Ala Ile Thr Lys				
	325	330	335	
aat aat gac ctg gtt cgt aag aag aga gtt gaa gca gac cga agg taa				1056
Asn Asn Asp Leu Val Arg Lys Lys Arg Val Glu Ala Asp Arg Arg *				
	340	345	350	
acttccttga ggagaagtga agtttccactg tggatatggcc attgaaaaac aaaaactctt				1116
cttcttcccc atcaggacca ttttatcaaa gttcgttcat ttccgttaac cacataacta				1176
ataatttaaat tggtattctt ttttagcact acttatttat cttggatttt gtaatatatg				1236
caattgtttt atttgctcat gggcacttct ggcaacttga caaatggacc gatgcagatt				1296
ttagagagtg acgacatgga aatgaattt aaccactttc ttaaaaaaaaa aaaa				1350
<210>	880			
<211>	855			
<212>	DNA			
<213>	Homo sapiens			
<220>				
<221>	CDS			
<222>	(157) .. (771)			
<400>	880			
gcacgagtag tggagcccggt ttgttccgcc cgtgtcgagc ctggagccag aacctgtgaa				60
gagcggaagg gccaaaggac gtcttctcca cgccgctccg actccagggg agccgtggcc				120
tcctctccgc cctagcgtg agaaccgtgg gtaccg atg gat gtg gcc gag agc				174
		Met Asp Val Ala Glu Ser		
		1	5	
cct gaa cgg gat cct cac tct cca gag gat gaa gag cag cca cag gga				222
Pro Glu Arg Asp Pro His Ser Pro Glu Asp Glu Glu Gln Pro Gln Gly				
	10	15	20	
ctc tcg gac gat gac att ctg agg gac agc ggg tcc gat cag gat ttg				270
Leu Ser Asp Asp Ile Leu Arg Asp Ser Gly Ser Asp Gln Asp Leu				
	25	30	35	
gac ggg gcg ggg gtg agg gct tct gat ctg gag gat gag gaa agt gca				318
Asp Gly Ala Gly Val Arg Ala Ser Asp Leu Glu Asp Glu Glu Ser Ala				
	40	45	50	
gcc agg ggg ccg agc cag gag gag gaa gat aat cac tcc gac gag gag				366
Ala Arg Gly Pro Ser Gln Glu Glu Glu Asp Asn His Ser Asp Glu Glu				

55	60	65	70	
gac cgg gca agt gag cct aaa tcc caa gac cag gac tca gag gtg aat				414
Asp Arg Ala Ser Glu Pro Lys Ser Gln Asp Gln Asp Ser Glu Val Asn				
	75	80	85	
gag ctg agc cgg ggc ccg acc agc tcc ccc tgc gag gag gag ggg gac				462
Glu Leu Ser Arg Gly Pro Thr Ser Ser Pro Cys Glu Glu Glu Gly Asp				
	90	95	100	
gaa ggg gag gaa gac cgg aca agc gac ctt agg gat gag gcc tcc tca				510
Glu Gly Glu Glu Asp Arg Thr Ser Asp Leu Arg Asp Glu Ala Ser Ser				
	105	110	115	
gtc acc agg gag ctg gat gag cat gag cta gac tac gat gag gag gtt				558
Val Thr Arg Glu Leu Asp Glu His Glu Leu Asp Tyr Asp Glu Glu Val				
	120	125	130	
cct gag gag cca gct ccc gcc gtc cag gag gac gag gct gag aaa gcg				606
Pro Glu Glu Pro Ala Pro Ala Val Gln Glu Asp Glu Ala Glu Lys Ala				
	135	140	145	150
ggg gct gag gat gat gag gag aag ggc gaa ggc act ccc agg gag gag				654
Gly Ala Glu Asp Asp Glu Glu Lys Gly Glu Gly Thr Pro Arg Glu Glu				
	155	160	165	
ggg aag gct ggt gtt cag agt gtg gga gaa aag gaa tcc ctg gag gct				702
Gly Lys Ala Gly Val Gln Ser Val Gly Glu Lys Glu Ser Leu Glu Ala				
	170	175	180	
gcc aag gag aaa aag aaa gag gac gat gat gga gaa atc gaa ttt agt				750
Ala Lys Glu Lys Lys Lys Glu Asp Asp Asp Gly Glu Ile Glu Phe Ser				
	185	190	195	
agt agt agg cgg ccg ctg tag ag gatccaagct tacgtacgcg tgcattgcgac				803
Ser Ser Arg Arg Pro Leu *				
	200	205		
gtcatagctc ttctatagtg tcacctaaat gcgattcact taccgctaca tc				855

<210> 881
 <211> 1973
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (255) .. (1784)

cctgtattac gtagacccaa gctggctagc gtttaaactt aagcttggtg cagagctcgg	60
atccactagt ccagtgtggt ggaattcgat ggaggacgca gaggcacgct gttgccatgg	120
cagtgtgggtc ctggctgccg cggaggcagg tgccgggggtc tcctttgcct caatgtgaag	180
agcttaaaaa gaggaggaga ggagaactcc cccggccatc tctgtgatcc cagccgccgc	240
attttacaca gaaa atg aat gaa aat aaa gat act gat tca aag aaa agt	290
Met Asn Glu Asn Lys Asp Thr Asp Ser Lys Lys Ser	
1 5 10	

gaa gaa tac gaa gat gac ttt gaa aag gac ctg gag tgg tta att aat Glu Glu Tyr Glu Asp Asp Phe Glu Lys Asp Leu Glu Trp Leu Ile Asn 15 20 25	338
gaa aat gaa aaa agt gat gcc agc ata ata gag atg gct tgt gag aag Glu Asn Glu Lys Ser Asp Ala Ser Ile Ile Glu Met Ala Cys Glu Lys 30 35 40	386
gaa gag aat att aac caa gac tta aaa gag aat gag aca gta atg gag Glu Glu Asn Ile Asn Gln Asp Leu Lys Glu Asn Glu Thr Val Met Glu 45 50 55 60	434
cac acc aaa cgg cat tct gat cct gac aaa tct ttg cag gat gag gtc His Thr Lys Arg His Ser Asp Pro Asp Lys Ser Leu Gln Asp Glu Val 65 70 75	482
tca cca aga aga aat gac atc att tct gta cca ggt att caa cct ttg Ser Pro Arg Arg Asn Asp Ile Ile Ser Val Pro Gly Ile Gln Pro Leu 80 85 90	530
gat ccc ata tca gat tca gat agt gaa aac tct ttc cag gaa tcc aaa Asp Pro Ile Ser Asp Ser Asp Ser Glu Asn Ser Phe Gln Glu Ser Lys 95 100 105	578
cta gaa agc cag aaa gac ttg gag gag gaa gag gat gag gaa gta agg Leu Glu Ser Gln Lys Asp Leu Glu Glu Glu Glu Asp Glu Glu Val Arg 110 115 120	626
aga tat att atg gag aaa att gta caa gct aac aag ctt cta cag aat Arg Tyr Ile Met Glu Lys Ile Val Gln Ala Asn Lys Leu Leu Gln Asn 125 130 135 140	674
caa gaa ccg gtg aat gat aaa agg gag cga aaa ctt aag ttc aag gac Gln Glu Pro Val Asn Asp Lys Arg Glu Arg Lys Leu Lys Phe Lys Asp 145 150 155	722
cag tta gtt gat ttg gaa gtt cct cca cta gaa gac act act act ttt Gln Leu Val Asp Leu Glu Val Pro Pro Leu Glu Asp Thr Thr Thr Phe 160 165 170	770
aaa aat tat ttt gaa aac gaa agg aat atg ttt ggg aaa ctg tca caa Lys Asn Tyr Phe Glu Asn Glu Arg Asn Met Phe Gly Lys Leu Ser Gln 175 180 185	818
tta tgt att tcc aat gat ttt gga caa gaa gat gtg ctc ctg tca ctt Leu Cys Ile Ser Asn Asp Phe Gly Gln Glu Asp Val Leu Leu Ser Leu 190 195 200	866
act aat gga agc tgt gaa gaa aac aag gat agg aca ata ctg gta gag Thr Asn Gly Ser Cys Glu Glu Asn Lys Asp Arg Thr Ile Leu Val Glu 205 210 215 220	914
aga gat gga aaa ttt gaa ctt ctg aat tta caa gac att gcc agt cag Arg Asp Gly Lys Phe Glu Leu Leu Asn Leu Gln Asp Ile Ala Ser Gln 225 230 235	962
ggg ttt ttg cct ccc att aat aat gca aat agt aca gaa aat gac cct Gly Phe Leu Pro Pro Ile Asn Asn Ala Asn Ser Thr Glu Asn Asp Pro 240 245 250	1010
cag cag ttg tta ccc aga tct tcc aac tcc tct gtc agt ggc acc aag Gln Gln Leu Leu Pro Arg Ser Ser Asn Ser Ser Val Ser Gly Thr Lys 255 260 265	1058

aaa gaa gat tct aca gca aag att cat gct gtc act cac tca tca aca	1106
Lys Glu Asp Ser Thr Ala Lys Ile His Ala Val Thr His Ser Ser Thr	
270 275 280	
gga gag ccg ctg gct tat atc gct cag cca cca ctc aac cgc aag act	1154
Gly Glu Pro Leu Ala Tyr Ile Ala Gln Pro Pro Leu Asn Arg Lys Thr	
285 290 295 300	
tgt cca agc tct gct gtc aac tca gat cga agt aaa ggg aat ggg aaa	1202
Cys Pro Ser Ser Ala Val Asn Ser Asp Arg Ser Lys Gly Asn Gly Lys	
305 310 315	
tct aat cac agg aca cag tct gca cat atc tca cca gtg act tca aca	1250
Ser Asn His Arg Thr Gln Ser Ala His Ile Ser Pro Val Thr Ser Thr	
320 325 330	
tac tgt ctt tcc cct cga cag aaa gaa cta caa aaa caa cta gaa gaa	1298
Tyr Cys Leu Ser Pro Arg Gln Lys Glu Leu Gln Lys Gln Leu Glu Glu	
335 340 345	
aag aga gaa aaa ctg aaa aga gag gaa gag cga cga aaa ata gaa gaa	1346
Lys Arg Glu Lys Leu Lys Arg Glu Glu Glu Arg Arg Lys Ile Glu Glu	
350 355 360	
gag aaa gaa aaa aag aga gag aat gac ata gta ttt aaa gcg tgg ttg	1394
Glu Lys Glu Lys Lys Arg Glu Asn Asp Ile Val Phe Lys Ala Trp Leu	
365 370 375 380	
caa aag aaa aga gag cag gtc tta gaa atg agg aga att cag cga gca	1442
Gln Lys Lys Arg Glu Gln Val Leu Glu Met Arg Arg Ile Gln Arg Ala	
385 390 395	
aag gaa att gaa gac atg aac agt aga cag gaa aac aga gat cca caa	1490
Lys Glu Ile Glu Asp Met Asn Ser Arg Gln Glu Asn Arg Asp Pro Gln	
400 405 410	
caa gct ttt cga tta tgg ctt aaa aaa aag cac gaa gag cag atg aaa	1538
Gln Ala Phe Arg Leu Trp Leu Lys Lys Lys His Glu Glu Gln Met Lys	
415 420 425	
gaa aga cag aca gaa gaa cta aga aag caa gag gaa tgt tta ttc ttc	1586
Glu Arg Gln Thr Glu Glu Leu Arg Lys Gln Glu Glu Cys Leu Phe Phe	
430 435 440	
ctt aaa gga aca gaa ggc cgg gaa agg gcc ttt aaa caa tgg tta aga	1634
Leu Lys Gly Thr Glu Gly Arg Glu Arg Ala Phe Lys Gln Trp Leu Arg	
445 450 455 460	
agg aaa cgg atg gaa aaa atg gca gag caa caa gct gtc aga gag aga	1682
Arg Lys Arg Met Glu Lys Met Ala Glu Gln Gln Ala Val Arg Glu Arg	
465 470 475	
act aga cag ctc cga cta gaa gct aag cgt tct aaa cag tta cag cac	1730
Thr Arg Gln Leu Arg Leu Glu Ala Lys Arg Ser Lys Gln Leu Gln His	
480 485 490	
cac cta tat atg tca gaa gcc aaa cct ttt cgt ttt act gat cat tat	1778
His Leu Tyr Met Ser Glu Ala Lys Pro Phe Arg Phe Thr Asp His Tyr	
495 500 505	
aac tga aagtttctat taaatatttc agtgggcagc tgctatcaaa attttggata	1834
Asn *	
510	

[illegible]

cagcaatttc tgaagatttc agttcataat tgacgtttcg tgggtagctc tt 951

<210> 883
 <211> 508
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (116) .. (328)

<400> 883
 aaaatgtatg cggtagtagc tggctagcgt ttaaacttaa gcttgggtacc gagctcggat 60
 ccactagtcc agtgtggtgg aattcgcggt ttcggcgggc tccccgggta caaaa atg 118
 Met
 1
 gct gtg gct agc gat ttc tac ctg cgc tac tac gta ggg cac aag ggc 166
 Ala Val Ala Ser Asp Phe Tyr Leu Arg Tyr Tyr Val Gly His Lys Gly
 5 10 15
 aag ttt ggg cac gag ttt ctg gag ttc gaa ttt cgg ccg gac ggt gag 214
 Lys Phe Gly His Glu Phe Leu Glu Phe Glu Phe Arg Pro Asp Gly Glu
 20 25 30
 aag agg ccc acg gca cgc ggt gct ggg aaa ggg gag cga gac cga gag 262
 Lys Arg Pro Thr Ala Arg Gly Ala Gly Lys Gly Glu Arg Asp Arg Glu
 35 40 45
 gcc ggg tgg tgt gga ggg tac agg cgg cgg agg cca ctg ctt ccc tcg 310
 Ala Gly Trp Cys Gly Gly Tyr Arg Arg Arg Pro Leu Leu Pro Ser
 50 55 60 65
 aag gaa ata gga gct taa gaatag aggaggcata agttggtttt ataaatgaaa 364
 Lys Glu Ile Gly Ala *
 70
 gagaattaat tgcaataaat taaagctaact cctgtcacaa actgaaaagt tgaacctaca 424
 gtaatcagaa ttctgtaaca gtgcaccaga agggactcta gatcgtcgcc ctgattgaaa 484
 atgctagcac ttttttgaaa accg 508

<210> 884
 <211> 792
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (122) .. (751)

<400> 884
 cactgagtcc ctcgtagcggg cggaggaaga cctccgcgga cagacattgc aagacacccc 60
 tgctcctcgt tggcaagccg ccccatgatg aaggcctaca cctggtcacg gagacttttg 120

g atg cag cct tta acg aag gac gca ggc atg agc ctg tcc tct gtg 166
 Met Gln Pro Leu Thr Lys Asp Ala Gly Met Ser Leu Ser Ser Val
 1 5 10 15
 acg ctg gcc agc gcc cta cag gtc agg ggt gaa gct ctg tct gag gag 214
 Thr Leu Ala Ser Ala Leu Gln Val Arg Gly Glu Ala Leu Ser Glu Glu
 20 25 30
 gaa atc tgg tcc ctc ctg ttc ctg gcc gct gag cag ctc ctg gaa gac 262
 Glu Ile Trp Ser Leu Leu Phe Leu Ala Ala Glu Gln Leu Leu Glu Asp
 35 40 45
 ctc cgc aac gat tcc tcg gac tat gtg gtt tgc ccc tgg tca gcc ctg 310
 Leu Arg Asn Asp Ser Ser Asp Tyr Val Val Cys Pro Trp Ser Ala Leu
 50 55 60
 ctt tct gca gct gga agc ctt tct ttc caa ggc cgt gtt tct cat ata 358
 Leu Ser Ala Ala Gly Ser Leu Ser Phe Gln Gly Arg Val Ser His Ile
 65 70 75
 gag gct gct cct ttc aag gcc cct gaa ctg cta cag gga cag agt gag 406
 Glu Ala Ala Pro Phe Lys Ala Pro Glu Leu Leu Gln Gly Gln Ser Glu
 80 85 90 95
 gat gag cag cct gat gca tct cag atg cat gtc tat tct tta gga atg 454
 Asp Glu Gln Pro Asp Ala Ser Gln Met His Val Tyr Ser Leu Gly Met
 100 105 110
 acc ctc tac tgg tca gca ggg ttt cat gtt ccg cca cat cag ccc ctg 502
 Thr Leu Tyr Trp Ser Ala Gly Phe His Val Pro Pro His Gln Pro Leu
 115 120 125
 cag ctc tgc gag ccc ctg cac tcc atc ctg ctg acc atg tgt gaa gac 550
 Gln Leu Cys Glu Pro Leu His Ser Ile Leu Leu Thr Met Cys Glu Asp
 130 135 140
 cag cct cac agg cgg tgc acg ttg cag tcg gtt ctg gaa gct tgt cgg 598
 Gln Pro His Arg Arg Cys Thr Leu Gln Ser Val Leu Glu Ala Cys Arg
 145 150 155
 gtt cat gag aaa gaa gtg tct gtc tac cca gcc cct gct ggt ctc cac 646
 Val His Glu Lys Glu Val Ser Val Tyr Pro Ala Pro Ala Gly Leu His
 160 165 170 175
 atc aga agg ctg gtt ggc ttg gtt ctg ggt acc att tct gag gtc agt 694
 Ile Arg Arg Leu Val Gly Leu Val Leu Gly Thr Ile Ser Glu Val Ser
 180 185 190
 aga gaa ccg tgc ttt tca agc agt agc tgc tgg tca tgt gtg gct att 742
 Arg Glu Pro Cys Phe Ser Ser Ser Ser Cys Trp Ser Cys Val Ala Ile
 195 200 205
 aaa att tga attagttata ttatcattaa ctaaaataaa ataaaaaaaa a 792
 Lys Ile *
 210

<210> 885

<211> 2136

<212> DNA

<213> Homo sapiens

<220>
 <221> CDS
 <222> (309) .. (1625)

<400> 885
 aatgcaggac cggtcaggaa ttcccggtc gacgatttcg tcgagggggg gttaaaggcc 60
 cccaaaacat gcacacatga aaagggcaaa aagtaaccgt ccttgacagg gagtcttaac 120
 tagagaagga aacggaacta aactggcggg ctccgtggaa gcgtggccgg cagcgtcccg 180
 gacgaggaga gacagcgtct tgctcagtca ccagagctgg agtgcagtga tcatagctca 240
 tcgcatcctt gaactcctgg gcttaagcta tcctcccgcc ttagcctcct gaatagctgg 300
 gaccacag atg tct ttg gtg gac ttg gga aag agg ttg cta gaa gca gca 350
 Met Ser Leu Val Asp Leu Gly Lys Arg Leu Leu Glu Ala Ala
 1 5 10
 aga aaa ggc caa gat gat gaa gtg aga acg ttg atg gca aat ggc gcc 398
 Arg Lys Gly Gln Asp Asp Glu Val Arg Thr Leu Met Ala Asn Gly Ala
 15 20 25 30
 cca ttc acc aca gac tgg ttt tcc aaa ttg aga gtc tcc tgt gga tat 446
 Pro Phe Thr Thr Asp Trp Phe Ser Lys Leu Arg Val Ser Cys Gly Tyr
 35 40 45
 ata ggt gat aat tgt aag aat ggt gca gat gtg aat gcc aag gac atg 494
 Ile Gly Asp Asn Cys Lys Asn Gly Ala Asp Val Asn Ala Lys Asp Met
 50 55 60
 ctg aag atg aca gct ttg cat tgg gcc aca gag cgc cac cat cga gat 542
 Leu Lys Met Thr Ala Leu His Trp Ala Thr Glu Arg His His Arg Asp
 65 70 75
 gtc gta gag tta ctt atc aaa tat gga gct gat gtc cat gct ttc agc 590
 Val Val Glu Leu Leu Ile Lys Tyr Gly Ala Asp Val His Ala Phe Ser
 80 85 90
 aaa ttt gat aaa tca gcc ttt gac ata gct ctg gag aaa aac aat gct 638
 Lys Phe Asp Lys Ser Ala Phe Asp Ile Ala Leu Glu Lys Asn Asn Ala
 95 100 105 110
 gag att ttg gtc atc ctc cag gaa gca atg cag aat cag gtg aat gtt 686
 Glu Ile Leu Val Ile Leu Gln Glu Ala Met Gln Asn Gln Val Asn Val
 115 120 125
 aat cca gag aga gcc aac cct gtg act gac cct gtg agt atg gct gct 734
 Asn Pro Glu Arg Ala Asn Pro Val Thr Asp Pro Val Ser Met Ala Ala
 130 135 140
 cca ttc atc ttc acg tcg ggt gag gtt gtt aac ctc gca agc ctt att 782
 Pro Phe Ile Phe Thr Ser Gly Glu Val Val Asn Leu Ala Ser Leu Ile
 145 150 155
 tct tca acc aac acc aaa aca acc tca ggt gac ccc cat gcc tca aca 830
 Ser Ser Thr Asn Thr Lys Thr Thr Ser Gly Asp Pro His Ala Ser Thr
 160 165 170
 gta cag ttt tca aat tct acc acc tca gtg ctg gct acc ctt gca gct 878
 Val Gln Phe Ser Asn Ser Thr Thr Ser Val Leu Ala Thr Leu Ala Ala
 175 180 185 190

ctt gct gag gca tca gtc ccc ctc tcc aac tca cac aga gcc aca gcc	926
Leu Ala Glu Ala Ser Val Pro Leu Ser Asn Ser His Arg Ala Thr Ala	
195 200 205	
aat aca gag gaa att ata gaa gga aat tcc gtt gac tca tca atc cag	974
Asn Thr Glu Glu Ile Ile Glu Gly Asn Ser Val Asp Ser Ser Ile Gln	
210 215 220	
caa gta atg ggg agt gga ggc cag agg gtc atc acc ata gtg act gat	1022
Gln Val Met Gly Ser Gly Gly Gln Arg Val Ile Thr Ile Val Thr Asp	
225 230 235	
gga gtc cct ctg ggt aat atc caa act tca atc cct act gga ggc att	1070
Gly Val Pro Leu Gly Asn Ile Gln Thr Ser Ile Pro Thr Gly Gly Ile	
240 245 250	
ggc cag cca ttt att gta act gtg caa gat gga cag caa gtt cta act	1118
Gly Gln Pro Phe Ile Val Thr Val Gln Asp Gly Gln Gln Val Leu Thr	
255 260 265 270	
gta cct gct ggt aag ggt gca gag gag act gta att aaa gag gaa gaa	1166
Val Pro Ala Gly Lys Gly Ala Glu Glu Thr Val Ile Lys Glu Glu Glu	
275 280 285	
gaa gag aag ttg cca cta aca aag aaa cca agg ata gga gag aag aca	1214
Glu Glu Lys Leu Pro Leu Thr Lys Lys Pro Arg Ile Gly Glu Lys Thr	
290 295 300	
aac agt gtg gag gaa agc aag gaa ggc aat gaa aga gag cta cta cag	1262
Asn Ser Val Glu Glu Ser Lys Glu Gly Asn Glu Arg Glu Leu Leu Gln	
305 310 315	
caa caa ctc cag gag gcc aat cga aga gcc cag gaa tac cga cac cag	1310
Gln Gln Leu Gln Glu Ala Asn Arg Arg Ala Gln Glu Tyr Arg His Gln	
320 325 330	
ctc cta aag aaa gag cag gaa gca gaa cag tac cgt ctt aag ctg gag	1358
Leu Leu Lys Lys Glu Gln Glu Ala Glu Gln Tyr Arg Leu Lys Leu Glu	
335 340 345 350	
gcc ata gcc cga cag cag ccc aat gga gtt gat ttc acc atg gtt gaa	1406
Ala Ile Ala Arg Gln Gln Pro Asn Gly Val Asp Phe Thr Met Val Glu	
355 360 365	
gag gtg gct gag gta gat gct gta gta gtc aca gag ggg gag ttg gaa	1454
Glu Val Ala Glu Val Asp Ala Val Val Val Thr Glu Gly Glu Leu Glu	
370 375 380	
gag aga gag aca aaa gtg act ggg tca gca ggg gcc acg gag cct cac	1502
Glu Arg Glu Thr Lys Val Thr Gly Ser Ala Gly Ala Thr Glu Pro His	
385 390 395	
act aga ggt ttc cat ggc aac tgt ttc atc tta ata tgc aag ggc cac	1550
Thr Arg Gly Phe His Gly Asn Cys Phe Ile Leu Ile Cys Lys Gly His	
400 405 410	
aat ttg cac tgt gtt cat att aat cct ctt tta aaa aag gaa ata tac	1598
Asn Leu His Cys Val His Ile Asn Pro Leu Leu Lys Lys Glu Ile Tyr	
415 420 425 430	
aga aga caa aca ttg tat aaa aac taa gagtg tctttaagaa gaaaactata	1650
Arg Arg Gln Thr Leu Tyr Lys Asn *	
435	

gcagggtaca atgcttgggc tcaggaagtt tctctgtgca actagaaaat tcaaagccat 1710
 atttagggaa ctttttttct gaggggccaa aagaataaag gaccaaattt cttagctcat 1770
 atcattgctt taaacataga agtaaaagaa tactgcatgt tgtgggttga tttttttttt 1830
 ttaaataact gactttctca caaaagattt taagataaca tttctaatat atatgcacca 1890
 atatatatgc ctttaataat tataccatca agtgacctga aaatgccctt tagatttatg 1950
 atgcgtatct gttggaaaaa ccaattggaa ggggaagttag acaagctttg gggaagagaa 2010
 aaggaatata gtccatttcc aaaggagcag gaactcccaa ccttaagtta atttactga 2070
 agagaatttt cccttttttt tttttttttg gaaacaaagg ggattttaac ttcaaaaaaa 2130
 aaaaaa 2136

<210> 886
 <211> 1335
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(1335)

<400> 886
 atg att gaa gac aat aag gag aac aaa gac cat tcc tta gaa agg gga 48
 Met Ile Glu Asp Asn Lys Glu Asn Lys Asp His Ser Leu Glu Arg Gly
 1 5 10 15
 aga gca agt ctc att ttt tcc tta aag aat gaa gtt gga gga ctt ata 96
 Arg Ala Ser Leu Ile Phe Ser Leu Lys Asn Glu Val Gly Gly Leu Ile
 20 25 30
 aaa gcc ctg aaa atc ttt cag gag aag cat gtg aat ctg tta cat atc 144
 Lys Ala Leu Lys Ile Phe Gln Glu Lys His Val Asn Leu Leu His Ile
 35 40 45
 gag tcc cga aaa tca aaa aga aga aac tca gaa ttt gag att ttt gtt 192
 Glu Ser Arg Lys Ser Lys Arg Arg Asn Ser Glu Phe Glu Ile Phe Val
 50 55 60
 gac tgt gac atc aac aga gaa caa ttg aat gat att ttt cat ctg ctg 240
 Asp Cys Asp Ile Asn Arg Glu Gln Leu Asn Asp Ile Phe His Leu Leu
 65 70 75 80
 aag tct cat acc aat gtt ctc tct gtg aat cta cca gat aat ttt act 288
 Lys Ser His Thr Asn Val Leu Ser Val Asn Leu Pro Asp Asn Phe Thr
 85 90 95
 ttg aag gaa gat ggt atg gaa act gtt cct tgg ttt cca aag aag att 336
 Leu Lys Glu Asp Gly Met Glu Thr Val Pro Trp Phe Pro Lys Lys Ile
 100 105 110
 tct gac ctg gac cat tgt gcc aac aga gtt ctg atg tat gga tct gaa 384
 Ser Asp Leu Asp His Cys Ala Asn Arg Val Leu Met Tyr Gly Ser Glu
 115 120 125
 cta gat gca gac cat cct ggc ttc aaa gac aat gtc tac cgt aaa cgt 432

Leu Asp Ala Asp His Pro Gly Phe Lys Asp Asn Val Tyr Arg Lys Arg	
130 135 140	
cga aag tat ttt gcg gac ttg gct atg aac tat aaa cat gga gac ccc	480
Arg Lys Tyr Phe Ala Asp Leu Ala Met Asn Tyr Lys His Gly Asp Pro	
145 150 155 160	
att cca aag gtt gaa ttc act gaa gag gag att aag acc tgg gga acc	528
Ile Pro Lys Val Glu Phe Thr Glu Glu Glu Ile Lys Thr Trp Gly Thr	
165 170 175	
gta ttc caa gag ctc aac aaa ctc tac cca acc cat gct tgc aga gag	576
Val Phe Gln Glu Leu Asn Lys Leu Tyr Pro Thr His Ala Cys Arg Glu	
180 185 190	
tat ctc aaa aac tta cct ttg ctt tct aaa tat tgt gga tat cgg gag	624
Tyr Leu Lys Asn Leu Pro Leu Leu Ser Lys Tyr Cys Gly Tyr Arg Glu	
195 200 205	
gat aat atc cca caa ttg gaa gat gtc tcc aac ttt tta aaa gag cgt	672
Asp Asn Ile Pro Gln Leu Glu Asp Val Ser Asn Phe Leu Lys Glu Arg	
210 215 220	
aca ggt ttt tcc atc cgt cct gtg gct ggt tac tta tca cca aga gat	720
Thr Gly Phe Ser Ile Arg Pro Val Ala Gly Tyr Leu Ser Pro Arg Asp	
225 230 235 240	
ttc tta tca ggt tta gcc ttt cga gtt ttt cac tgc act caa tat gtg	768
Phe Leu Ser Gly Leu Ala Phe Arg Val Phe His Cys Thr Gln Tyr Val	
245 250 255	
aga cac agt tca gac ccc ttc tat acc cca gag ccg gat acc tgc cat	816
Arg His Ser Ser Asp Pro Phe Tyr Thr Pro Glu Pro Asp Thr Cys His	
260 265 270	
gaa ctc tta ggt cac gtt ccc ctt ttg gct gag cca agt ttt gct cag	864
Glu Leu Leu Gly His Val Pro Leu Leu Ala Glu Pro Ser Phe Ala Gln	
275 280 285	
ttc tcc caa gaa att ggc ctg gct tcc ctt gga gct tca gag gag gct	912
Phe Ser Gln Glu Ile Gly Leu Ala Ser Leu Gly Ala Ser Glu Glu Ala	
290 295 300	
gtt caa aaa ctg gca acg tgc tac ttt ttc act gtg gag ttt ggt cta	960
Val Gln Lys Leu Ala Thr Cys Tyr Phe Phe Thr Val Glu Phe Gly Leu	
305 310 315 320	
tgt aaa caa gac gga cag tta cga gtc ttc ggc gct ggc tta ctt tct	1008
Cys Lys Gln Asp Gly Gln Leu Arg Val Phe Gly Ala Gly Leu Leu Ser	
325 330 335	
tct atc agt gaa ctc aaa cat gtg ctt tct gga cat gcc aaa gta aag	1056
Ser Ile Ser Glu Leu Lys His Val Leu Ser Gly His Ala Lys Val Lys	
340 345 350	
cct ttt gat ccc aag att acc tgc aaa caa gaa tgc ctc atc aca act	1104
Pro Phe Asp Pro Lys Ile Thr Cys Lys Gln Glu Cys Leu Ile Thr Thr	
355 360 365	
ttt cag gat gtc tac ttt gta tct gaa agt ttt gaa gat gca aag gag	1152
Phe Gln Asp Val Tyr Phe Val Ser Glu Ser Phe Glu Asp Ala Lys Glu	
370 375 380	
aag atg aga gaa ttt acc aaa aca att aag cgt ccc ttt gga gtg aaa	1200

[illegible]

act gct gcc ctc cga gtc acc gat ggc gca ttg gtg gtg gtg gac tgc	558
Thr Ala Ala Leu Arg Val Thr Asp Gly Ala Leu Val Val Val Asp Cys	
120 125 130	
gtg tca ggc gtg tgc gtg cag acg gag aca gtg ctg cgg cag gcc att	606
Val Ser Gly Val Cys Val Gln Thr Glu Thr Val Leu Arg Gln Ala Ile	
135 140 145	
gcc gag cgc atc aag cct gtg ctg atg atg aac aag atg gac cgc gcc	654
Ala Glu Arg Ile Lys Pro Val Leu Met Met Asn Lys Met Asp Arg Ala	
150 155 160	
ctg ctg gag ctg cag ctg gag ccc gag gag ctc tac cag act ttc cag	702
Leu Leu Glu Leu Gln Leu Glu Pro Glu Glu Leu Tyr Gln Thr Phe Gln	
165 170 175	
cgc atc gtg gag aac gtg aac gtc atc atc tcc acc tac ggc gag gcc	750
Arg Ile Val Glu Asn Val Asn Val Ile Ile Ser Thr Tyr Gly Glu Gly	
180 185 190 195	
gag agc ggc ccc atg ggc aac atc atg atc gat cct gtc ctc ggt acc	798
Glu Ser Gly Pro Met Gly Asn Ile Met Ile Asp Pro Val Leu Gly Thr	
200 205 210	
gtg ggc ttt ggg tct ggc ctc cac ggg tgg gcc ttc acc ctg aag cag	846
Val Gly Phe Gly Ser Gly Leu His Gly Trp Ala Phe Thr Leu Lys Gln	
215 220 225	
ttt gcc gag atg tat gtg gcc aag ttc gcc gcc aag ggg gag gcc cag	894
Phe Ala Glu Met Tyr Val Ala Lys Phe Ala Ala Lys Gly Glu Gly Gln	
230 235 240	
ttg ggg cct gcc gag cgg gcc aag aaa gta gag gac atg atg aag aag	942
Leu Gly Pro Ala Glu Arg Ala Lys Lys Val Glu Asp Met Met Lys Lys	
245 250 255	
ctg tgg ggt gac agg tac ttt gac cca gcc aac ggc aag ttc agc aag	990
Leu Trp Gly Asp Arg Tyr Phe Asp Pro Ala Asn Gly Lys Phe Ser Lys	
260 265 270 275	
tca gcc acc agc ccc gaa ggg aag aag ctg cca cgc acc ttc tgc cag	1038
Ser Ala Thr Ser Pro Glu Gly Lys Lys Leu Pro Arg Thr Phe Cys Gln	
280 285 290	
ctg atc ctg gac ccc atc ttc aag gtg ttt gat gcg atc atg aat ttc	1086
Leu Ile Leu Asp Pro Ile Phe Lys Val Phe Asp Ala Ile Met Asn Phe	
295 300 305	
aag aaa gag gag aca gca aaa ctg ata gag aaa ctg gac atc aaa ctg	1134
Lys Lys Glu Glu Thr Ala Lys Leu Ile Glu Lys Leu Asp Ile Lys Leu	
310 315 320	
gac agc gag gac aag gac aaa gaa ggc aaa ccc ctg ctg aag gct gtg	1182
Asp Ser Glu Asp Lys Asp Lys Glu Gly Lys Pro Leu Leu Lys Ala Val	
325 330 335	
atg cgc cgc tgg ctg cct gcc gga gac gcc ttg ttg cag atg atc acc	1230
Met Arg Arg Trp Leu Pro Ala Gly Asp Ala Leu Leu Gln Met Ile Thr	
340 345 350 355	
atc cac ctg ccc tcc cct gtg acg gcc cag aag tac cgc tgc gag ctc	1278
Ile His Leu Pro Ser Pro Val Thr Ala Gln Lys Tyr Arg Cys Glu Leu	
360 365 370	

ctg tac gag ggg ccc ccg gac gac gag gct gcc atg ggc att aaa agc	1326
Leu Tyr Glu Gly Pro Pro Asp Asp Glu Ala Ala Met Gly Ile Lys Ser	
375 380 385	
tgt gac ccc aaa ggc cct ctt atg atg tat att tcc aaa atg gtg cca	1374
Cys Asp Pro Lys Gly Pro Leu Met Met Tyr Ile Ser Lys Met Val Pro	
390 395 400	
acc tcc gac aaa ggt cgg ttc tac gcc ttt gga cga gtc ttc tcg ggg	1422
Thr Ser Asp Lys Gly Arg Phe Tyr Ala Phe Gly Arg Val Phe Ser Gly	
405 410 415	
ctg gtc tcc act ggc ctg aag gtc agg atc atg ggg ccc aac tat acc	1470
Leu Val Ser Thr Gly Leu Lys Val Arg Ile Met Gly Pro Asn Tyr Thr	
420 425 430 435	
cct ggg aag aag gag gac ctc tac ctg aag cca atc cag aga aca atc	1518
Pro Gly Lys Lys Glu Asp Leu Tyr Leu Lys Pro Ile Gln Arg Thr Ile	
440 445 450	
ttg atg atg ggc cgc tac gtg gag ccc atc gag gat gtg cct tgt ggg	1566
Leu Met Met Gly Arg Tyr Val Glu Pro Ile Glu Asp Val Pro Cys Gly	
455 460 465	
aac att gtg ggc ctc gtg ggc gtg gac cag ttc ctg gtg aag acg ggc	1614
Asn Ile Val Gly Leu Val Gly Val Asp Gln Phe Leu Val Lys Thr Gly	
470 475 480	
acc atc acc acc ttc gag cac gcg cac aac atg cgg gtg atg aag ttc	1662
Thr Ile Thr Thr Phe Glu His Ala His Asn Met Arg Val Met Lys Phe	
485 490 495	
agc gtc agc cct gtt gtc aga gtg gcc gtg gag gcc aag aac ccg gct	1710
Ser Val Ser Pro Val Val Arg Val Ala Val Glu Ala Lys Asn Pro Ala	
500 505 510 515	
gac ctg ccc aag ctg gtg gag ggg ctg aag cgg ctg gcc aag tcc gac	1758
Asp Leu Pro Lys Leu Val Glu Gly Leu Lys Arg Leu Ala Lys Ser Asp	
520 525 530	
ccc atg gtg cag tgc atc atc gag gag tcg gga gag cac atc atc gcg	1806
Pro Met Val Gln Cys Ile Ile Glu Glu Ser Gly Glu His Ile Ile Ala	
535 540 545	
ggc gcc ggc gag ctg cac ctg gag atc tgc ctg aag gac ctg gag gag	1854
Gly Ala Gly Glu Leu His Leu Glu Ile Cys Leu Lys Asp Leu Glu Glu	
550 555 560	
gac cac gcc tgc atc ccc atc aag aaa tct gac ccg gtc gtc tcg tac	1902
Asp His Ala Cys Ile Pro Ile Lys Lys Ser Asp Pro Val Val Ser Tyr	
565 570 575	
cgc gag acg gtc agt gaa gag tcg aac gtg ctc tgc ctc tcc aag tcc	1950
Arg Glu Thr Val Ser Glu Glu Ser Asn Val Leu Cys Leu Ser Lys Ser	
580 585 590 595	
ccc aac aag cac aac cgg ctg tac atg aag gcg cgg ccc ttc ccc gac	1998
Pro Asn Lys His Asn Arg Leu Tyr Met Lys Ala Arg Pro Phe Pro Asp	
600 605 610	
ggc ctg gcc gag gac atc gat aaa ggc gag gtg tcc gcc cgt cag gag	2046
Gly Leu Ala Glu Asp Ile Asp Lys Gly Glu Val Ser Ala Arg Gln Glu	
615 620 625	

ctc aag cag cgg gcg cgc tac ctg gcc gag aag tac gag tgg gac gtg Leu Lys Gln Arg Ala Arg Tyr Leu Ala Glu Lys Tyr Glu Trp Asp Val 630 635 640	2094
gct gag gcc cgc aag atc tgg tgc ttt ggg ccc gac ggc acc ggc ccc Ala Glu Ala Arg Lys Ile Trp Cys Phe Gly Pro Asp Gly Thr Gly Pro 645 650 655	2142
aac atc ctc acc gac atc acc aag ggt gtg cag tac ctc aac gag atc Asn Ile Leu Thr Asp Ile Thr Lys Gly Val Gln Tyr Leu Asn Glu Ile 660 665 670 675	2190
aag gac agt gtg gtg gcc ggc ttc cag tgg gcc acc aag gag ggc gca Lys Asp Ser Val Ala Gly Phe Gln Trp Ala Thr Lys Glu Gly Ala 680 685 690	2238
ctg tgt gag gag aac atg cgg ggt gtg cgc ttc gac gtc cac gac gtc Leu Cys Glu Glu Asn Met Arg Gly Val Arg Phe Asp Val His Asp Val 695 700 705	2286
acc ctg cac gcc gac gcc atc cac cgc gga ggg ggc cag atc atc ccc Thr Leu His Ala Asp Ala Ile His Arg Gly Gly Gly Gln Ile Ile Pro 710 715 720	2334
aca gca cgg cgc tgc ctc tac gcc agt gtg ctg acc gcc cag cca cgc Thr Ala Arg Arg Cys Leu Tyr Ala Ser Val Leu Thr Ala Gln Pro Arg 725 730 735	2382
ctc atg gag ccc atc tac ctt gtg gag atc cag tgt cca gag cag gtg Leu Met Glu Pro Ile Tyr Leu Val Glu Ile Gln Cys Pro Glu Gln Val 740 745 750 755	2430
gtc ggt ggc atc tac ggg gtt ttg aac agg aag cgg ggc cac gtg ttc Val Gly Gly Ile Tyr Gly Val Leu Asn Arg Lys Arg Gly His Val Phe 760 765 770	2478
gag gag tcc cag gtg gcc ggc acc ccc atg ttt gtg gtc aag gcc tat Glu Glu Ser Gln Val Ala Gly Thr Pro Met Phe Val Val Lys Ala Tyr 775 780 785	2526
ctg ccc gtc aac gag tcc ttt ggc ttc acc gct gac ctg agg tcc aac Leu Pro Val Asn Glu Ser Phe Gly Phe Thr Ala Asp Leu Arg Ser Asn 790 795 800	2574
acg ggc ggc cag gcg ttc ccc cag tgt gtg ttt gac cac tgg cag atc Thr Gly Gly Gln Ala Phe Pro Gln Cys Val Phe Asp His Trp Gln Ile 805 810 815	2622
ctg ccc gga gac ccc ttc gac aac agc agc cgc ccc agc cag gtg gtg Leu Pro Gly Asp Pro Phe Asp Asn Ser Ser Arg Pro Ser Gln Val Val 820 825 830 835	2670
gcg gag acc cgc aag cgc aag ggc ctg aaa gaa ggc atc cct gcc ctg Ala Glu Thr Arg Lys Arg Lys Gly Leu Lys Glu Gly Ile Pro Ala Leu 840 845 850	2718
gac aac ttc ctg gac aaa ttg tag gcggcccttc ctgcagcgcc tgccgccccg Asp Asn Phe Leu Asp Lys Leu * 855	2772
gggactcgca gcacccacag caccacgtcc tcgaattctc agacgacacc tggagactgt	2832
cccgacacag cgacgctccc ctgagagggtt tctggggccc gctgcgtgcc atcactcaac	2892

cataacactt gatgccgttt ctttcaatat ttattttccag agtccggagg cagcagacac 2952
gccctcttag tagggactta atgggccggt cggggagggg gaggcgggat gggacaccca 3012
acactttttc catttcttca gagggaaact cagatgtcca aactaatttt tcaaaaccta 3072
attttaacaa acgcattaag aggtttattt gggtagatgg cccgcagtgg cttttgcccc 3132
agaaagggga aaggaacacg cgggtagatg atttctagca ggcaggaagt cctgtgcggt 3192
gtcaccatga gcacctccag ctgtactagt gccattggaa taataaattt gataagggtg 3252
tgaaaaaaaa aaaa 3266

<210> 888
<211> 833
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (174)..(818)

<400> 888
ctcgtagccg gtcgcctgcg gtaccggtcc ggaattcccg ggtcgaccca cgcgtccgct 60
cttcaaccag gagccgagat ttctgttget ctgaagccat ccagggggtct ttaaccagaa 120
gagagaggag agcctcagga gttaggacca gaagaagcca gggaagcagt gca atg 176
Met
1
gct tca aaa atc ttg ctt aac gta caa gag gag gtg acc tgt ccc atc 224
Ala Ser Lys Ile Leu Leu Asn Val Gln Glu Glu Val Thr Cys Pro Ile
5 10 15
tgc ctg gag ctg ttg aca gaa ccc ttg agt cta gac tgt ggc cac agc 272
Cys Leu Glu Leu Leu Thr Glu Pro Leu Ser Leu Asp Cys Gly His Ser
20 25 30
ctc tgc cga gcc tgc atc act gtg agc aac aag gag gca gtg acc agc 320
Leu Cys Arg Ala Cys Ile Thr Val Ser Asn Lys Glu Ala Val Thr Ser
35 40 45
atg gga gga aaa agc agc tgt cct gtg tgt ggt atc agt tac tca ttt 368
Met Gly Gly Lys Ser Ser Cys Pro Val Cys Gly Ile Ser Tyr Ser Phe
50 55 60 65
gaa cat cta cag gct aat cag cat ctg gcc aac ata gtg gag aga ctc 416
Glu His Leu Gln Ala Asn Gln His Leu Ala Asn Ile Val Glu Arg Leu
70 75 80
aag gag gtc aag ttg agc cca gac aat ggg aag aag aga gat ctc tgt 464
Lys Glu Val Lys Leu Ser Pro Asp Asn Gly Lys Lys Arg Asp Leu Cys
85 90 95
gat cat cat gga gag aaa ctc cta ctc ttc tgt aag gag gat agg aaa 512
Asp His His Gly Glu Lys Leu Leu Leu Phe Cys Lys Glu Asp Arg Lys
100 105 110

gtc att tgc tgg ctt tgt gag cgg tct cag gag cac cgt ggt cac cac 560
 Val Ile Cys Trp Leu Cys Glu Arg Ser Gln Glu His Arg Gly His His
 115 120 125
 aca gtc ctc acg gag gaa gta ttc aag gaa tgt cag gag aaa ctc cag 608
 Thr Val Leu Thr Glu Glu Val Phe Lys Glu Cys Gln Glu Lys Leu Gln
 130 135 140 145
 gca gtc ctc aag agg ctg aag aag gaa gag gag gaa gct gag aag ctg 656
 Ala Val Leu Lys Arg Leu Lys Lys Glu Glu Glu Glu Ala Glu Lys Leu
 150 155 160
 gaa gct gac atc aga gaa gag aaa act tcc tgg aag tat cag gta caa 704
 Glu Ala Asp Ile Arg Glu Glu Lys Thr Ser Trp Lys Tyr Gln Val Gln
 165 170 175
 act gag aga caa agg ata caa aca gaa ttt gat cag ctt aga agc atc 752
 Thr Glu Arg Gln Arg Ile Gln Thr Glu Phe Asp Gln Leu Arg Ser Ile
 180 185 190
 cta aat aat gag gag cag aga gag ctg caa aga ttg gaa aaa aaa aaa 800
 Leu Asn Asn Glu Glu Gln Arg Glu Leu Gln Arg Leu Glu Lys Lys Lys
 195 200 205
 aaa aag atc ttt aat taa gcggccgcaa gctta 833
 Lys Lys Ile Phe Asn *
 210 215

<210> 889
 <211> 2385
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (103)..(1935)

<400> 889
 attccgagag agagacgccc tggaaggtct gtatcagcgt ctgtcgcgct gggaccacaca 60
 ctggcttttta aggaggacac ccggacacct ggaagctggg aa atg gac tca gtg 114
 Met Asp Ser Val
 1
 gcc ttt gaa gat gtg gct gtg aac ttc aca caa gag gag tgg gct ttg 162
 Ala Phe Glu Asp Val Ala Val Asn Phe Thr Gln Glu Glu Trp Ala Leu
 5 10 15 20
 ctg ggt cca tca cag aag agt ctc tac aga aat gtc atg cag gaa acc 210
 Leu Gly Pro Ser Gln Lys Ser Leu Tyr Arg Asn Val Met Gln Glu Thr
 25 30 35
 att agg aac ctg gac tgt ata gaa atg aaa tgg gag gac cag aac att 258
 Ile Arg Asn Leu Asp Cys Ile Glu Met Lys Trp Glu Asp Gln Asn Ile
 40 45 50
 gga gat cag tgc caa aat gcc aag aga aat cta aga agt cat aca tgt 306
 Gly Asp Gln Cys Gln Asn Ala Lys Arg Asn Leu Arg Ser His Thr Cys
 55 60 65

gaa att aaa gat gac agt caa tgt gga gaa act ttt ggc cag att cca	354
Glu Ile Lys Asp Asp Ser Gln Cys Gly Glu Thr Phe Gly Gln Ile Pro	
70 75 80	
gat agt att gtg aac aag aac act cct cga gta aat cca tgt gac agt	402
Asp Ser Ile Val Asn Lys Asn Thr Pro Arg Val Asn Pro Cys Asp Ser	
85 90 95 100	
ggt gag tgt gga gaa gtc gtc ttg ggt cat tcg tct ctt aat tgc aac	450
Gly Glu Cys Gly Glu Val Val Leu Gly His Ser Ser Leu Asn Cys Asn	
105 110 115	
atc aga gtt gac act gga cac aaa tca tgt gag cat cag gaa tat gga	498
Ile Arg Val Asp Thr Gly His Lys Ser Cys Glu His Gln Glu Tyr Gly	
120 125 130	
gag aag cca tat aca cat aaa caa cgt ggg aaa gcc atc agt cat cag	546
Glu Lys Pro Tyr Thr His Lys Gln Arg Gly Lys Ala Ile Ser His Gln	
135 140 145	
cac tcc ttc cag aca cat gaa agg ccc ccc acc gga aag aaa ccc ttc	594
His Ser Phe Gln Thr His Glu Arg Pro Pro Thr Gly Lys Lys Pro Phe	
150 155 160	
gat tgt aaa gaa tgt gca aaa acc ttt agt tct ctt gga aac ctc cga	642
Asp Cys Lys Glu Cys Ala Lys Thr Phe Ser Ser Leu Gly Asn Leu Arg	
165 170 175 180	
aga cac atg gcg gca cac cat gga gat gga cct tat aaa tgt aag ttg	690
Arg His Met Ala Ala His His Gly Asp Gly Pro Tyr Lys Cys Lys Leu	
185 190 195	
tgt ggg aaa gcc ttt gtt tgg ccc agt tta ttt cat ttg cac gaa aga	738
Cys Gly Lys Ala Phe Val Trp Pro Ser Leu Phe His Leu His Glu Arg	
200 205 210	
aca cac act gga gag aaa ccg tat gaa tgt aag cag tgt tct aaa gcc	786
Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Lys Gln Cys Ser Lys Ala	
215 220 225	
ttt cct ttt tac agt tcc tat cta aga cat gaa aga atc cac acg gga	834
Phe Pro Phe Tyr Ser Ser Tyr Leu Arg His Glu Arg Ile His Thr Gly	
230 235 240	
gag aaa gcg tat gaa tgt aag cag tgt tcc aaa gcc ttt cct gat tac	882
Glu Lys Ala Tyr Glu Cys Lys Gln Cys Ser Lys Ala Phe Pro Asp Tyr	
245 250 255 260	
agt acc tat cta aga cat gag aga act cac acc gga gag aaa ccc tat	930
Ser Thr Tyr Leu Arg His Glu Arg Thr His Thr Gly Glu Lys Pro Tyr	
265 270 275	
aaa tgt aca caa tgt ggg aaa gcc ttc agc tgt tac tat tac act cga	978
Lys Cys Thr Gln Cys Gly Lys Ala Phe Ser Cys Tyr Tyr Tyr Thr Arg	
280 285 290	
cta cat gaa agg act cac acg gga gaa caa ccc tat gca tgt aag caa	1026
Leu His Glu Arg Thr His Thr Gly Glu Gln Pro Tyr Ala Cys Lys Gln	
295 300 305	
tgt ggg aaa acg ttt tat cat cac aca agc ttt cga aga cac atg ata	1074
Cys Gly Lys Thr Phe Tyr His His Thr Ser Phe Arg Arg His Met Ile	
310 315 320	

agg cac act gga gac gga cca cat aaa tgt aag ata tgt ggg aaa ggc	1122
Arg His Thr Gly Asp Gly Pro His Lys Cys Lys Ile Cys Gly Lys Gly	
325 330 335 340	
ttt gat tgt cct agt tca gtt cga aat cat gaa act act cac act gga	1170
Phe Asp Cys Pro Ser Ser Val Arg Asn His Glu Thr Thr His Thr Gly	
345 350 355	
gag aaa ccc tat gaa tgt aag cag tgt ggg aaa gtg tta tct cat agc	1218
Glu Lys Pro Tyr Glu Cys Lys Gln Cys Gly Lys Val Leu Ser His Ser	
360 365 370	
tcg agc ttt cga agt cac atg ata aca cac aca gga gat gga ccc cag	1266
Ser Ser Phe Arg Ser His Met Ile Thr His Thr Gly Asp Gly Pro Gln	
375 380 385	
aaa tgc aag ata tgt ggg aaa gcc ttt ggt tgt ccc agt tta ttt caa	1314
Lys Cys Lys Ile Cys Gly Lys Ala Phe Gly Cys Pro Ser Leu Phe Gln	
390 395 400	
aga cat gaa agg act cac act gga gag aaa ccc tat caa tgt aaa caa	1362
Arg His Glu Arg Thr His Thr Gly Glu Lys Pro Tyr Gln Cys Lys Gln	
405 410 415 420	
tgt ggt aaa gcc ttc agt ctt gcc ggt tcc ctt cga aga cat gaa gca	1410
Cys Gly Lys Ala Phe Ser Leu Ala Gly Ser Leu Arg Arg His Glu Ala	
425 430 435	
act cac act gga gtg aaa ccc tat aaa tgt cag tgt ggg aaa gcc ttt	1458
Thr His Thr Gly Val Lys Pro Tyr Lys Cys Gln Cys Gly Lys Ala Phe	
440 445 450	
agt gat ctc tct tcc ttt caa aat cat gag aca act cac act gga gag	1506
Ser Asp Leu Ser Ser Phe Gln Asn His Glu Thr Thr His Thr Gly Glu	
455 460 465	
aag cca tat gag tgt aag gaa tgt ggg aaa gca ttc agt tgt ttc aaa	1554
Lys Pro Tyr Glu Cys Lys Glu Cys Gly Lys Ala Phe Ser Cys Phe Lys	
470 475 480	
tac ctt tct caa cat aaa agg acc cac aca gta gaa aaa cct tat gag	1602
Tyr Leu Ser Gln His Lys Arg Thr His Thr Val Glu Lys Pro Tyr Glu	
485 490 495 500	
tgt aaa aca tgt aga aaa gcc ttc agt cat ttc agt aac tta aaa gtc	1650
Cys Lys Thr Cys Arg Lys Ala Phe Ser His Phe Ser Asn Leu Lys Val	
505 510 515	
cat gaa agg att cac tct gga gag aag cca tat gaa tgt aag gaa tgt	1698
His Glu Arg Ile His Ser Gly Glu Lys Pro Tyr Glu Cys Lys Glu Cys	
520 525 530	
gga aaa gca ttc tct tgg ctc act tgc ctt cta cga cat gaa aga att	1746
Gly Lys Ala Phe Ser Trp Leu Thr Cys Leu Leu Arg His Glu Arg Ile	
535 540 545	
cac act gga gag aaa ccc tat gaa tgt cta caa tgt ggt aaa gcc ttc	1794
His Thr Gly Glu Lys Pro Tyr Glu Cys Leu Gln Cys Gly Lys Ala Phe	
550 555 560	
act cgt tcc cgt ttc ctt cga gga cat gaa aaa act cac act gga gag	1842
Thr Arg Ser Arg Phe Leu Arg Gly His Glu Lys Thr His Thr Gly Glu	
565 570 575 580	

aag ctg tat gaa tgt aag gaa tgt ggg aaa gca ttg agt tct ctc cgt 1890
Lys Leu Tyr Glu Cys Lys Glu Cys Gly Lys Ala Leu Ser Ser Leu Arg
585 590 595

tcc ttg cat aga cat aaa agg act cac tgg aaa gat act ctc taa atg 1938
Ser Leu His Arg His Lys Arg Thr His Trp Lys Asp Thr Leu *
600 605 610

tatggaatgt gggaaaacat tcagtacttt aatttcagaa acttgaaaga actcactttg 1998
gagatagacc ctatgaatgt aaacatggga taaagcotta agtagtttca attttttttaa 2058
atacagttat cccccaatat attgcagggg attggttcca gcaccctcta aatccacaga 2118
tgccaagtcc tttgttatat ggcatatttg catgtaacct atgcatatcc tccagtatac 2178
tgtgtaaatc atctctagat gacttttaac acctcatgca ttgtaaaagc tatgtaaata 2238
gttgtttgat tgtattgttt agagaatcat gacaagaaaa atagtctcta catgttcgat 2298
gcagacacaa ccattgcagg cccacctacg tggatatatgt caccagaac attaaaaatt 2358
gttttaacat tcaaaaaaaaa aaaaaaa 2385

<210> 890
<211> 1045
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (302)..(889)

<400> 890
gaaggcagct cgtggcgact gtccgtggtg ctgagcgccg gcgagagctg gcgcgagcgc 60
gctgatcggc tccctcgaaac tggggagggtc cagtgggggtc gcttagggcc caaagcccc 120
acccggctcc aaaagctccc agggcctccc caggcacccg tgctcgcccc ttccttcggt 180
cagaaagtcg cccctggggg gcagttcgtc ccaaagggtt tctcgaag aatctgagag 240
ggcgagtc ttgaccgagg gaatctctct gtgtagcctt ggaagccgcc agccccagaa 300
g atg cct gcc ttc aat aga ttg ttt ccc ctg gct tct ctc gtg ctt 346
Met Pro Ala Phe Asn Arg Leu Phe Pro Leu Ala Ser Leu Val Leu
1 5 10 15

atc tac tgg gtc agt gtc tgc ttc cct gtg tgt gtg gaa gtg ccc tcg 394
Ile Tyr Trp Val Ser Val Cys Phe Pro Val Cys Val Glu Val Pro Ser
20 25 30

gag acg gag gcc gtg cag ggc aac ccc atg aag ctg cgc tgc atc tcc 442
Glu Thr Glu Ala Val Gln Gly Asn Pro Met Lys Leu Arg Cys Ile Ser
35 40 45

tgc atg aag aga gag gag gtg gag gcc acc acg gtg gtg gaa tgg ttc 490
Cys Met Lys Arg Glu Glu Val Glu Ala Thr Thr Val Val Glu Trp Phe
50 55 60

tac agg ccc gag ggc ggt aaa gat ttc ctt att tac gag tat cgg aat 538

Tyr Arg Pro Glu Gly Gly Lys Asp Phe Leu Ile Tyr Glu Tyr Arg Asn
 65 70 75
 ggc cac cag gag gtg gag agc ccc ttt cag ggg cgc ctg cag tgg aat 586
 Gly His Gln Glu Val Glu Ser Pro Phe Gln Gly Arg Leu Gln Trp Asn
 80 85 90 95
 ggc agc aag gac ctg cag gac gtg tcc atc act gtg ctc aac gtc act 634
 Gly Ser Lys Asp Leu Gln Asp Val Ser Ile Thr Val Leu Asn Val Thr
 100 105 110
 ctg aac gac tct ggc ctc tac acc tgc aat gtg tcc cgg gag ttt gag 682
 Leu Asn Asp Ser Gly Leu Tyr Thr Cys Asn Val Ser Arg Glu Phe Glu
 115 120 125
 ttt gag gcg cat cgg ccc ttt gtg aag acg acg cgg ctg atc ccc cta 730
 Phe Glu Ala His Arg Pro Phe Val Lys Thr Thr Arg Leu Ile Pro Leu
 130 135 140
 aga gtc acc gag gag gct gga gag gac ttc acc tct gtg gtc tca gaa 778
 Arg Val Thr Glu Glu Ala Gly Glu Asp Phe Thr Ser Val Val Ser Glu
 145 150 155
 atc atg atg tac atc ctt ctg gtc ttc ctc acc ttg tgg ctg ctc atc 826
 Ile Met Met Tyr Ile Leu Leu Val Phe Leu Thr Leu Trp Leu Leu Ile
 160 165 170 175
 gag atg ata tat tgc tac aga aag gtc tca aaa gcc gaa gag gca gcc 874
 Glu Met Ile Tyr Cys Tyr Arg Lys Val Ser Lys Ala Glu Glu Ala Ala
 180 185 190
 caa gaa aac gcg taa gtccagagat gccaaagtaa taatgaaagc tagcaccttc 929
 Gln Glu Asn Ala *
 195
 agaatgcttg ctctcacagg tgagggtgcta agcagtttac attcatccgg acgcgtgggt 989
 cgaccggga attccggacc ggtacctgca ggcgtacgag cttcagtaat tcaaaa 1045

<210> 891
 <211> 936
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (7)..(594)

<400> 891

aggctg atg tat ata act atc tat tcg atg atg aag ata ccc cac caa 48
 Met Tyr Ile Thr Ile Tyr Ser Met Met Lys Ile Pro His Gln
 1 5 10
 acc caa aaa aag aga tct ctc gag gat ccg aat tcg cgg ccg cgt cga 96
 Thr Gln Lys Lys Arg Ser Leu Glu Asp Pro Asn Ser Arg Pro Arg Arg
 15 20 25 30
 cct ttc ttt aaa agt gtg aag gaa gaa gtg ttc tgg agg aac tac ttt 144
 Pro Phe Phe Lys Ser Val Lys Glu Glu Val Phe Trp Arg Asn Tyr Phe
 35 40 45

```

tac cgc gtc tcc ctg att aag cag tca gcc cag ctc acg gcc ctg gct      192
Tyr Arg Val Ser Leu Ile Lys Gln Ser Ala Gln Leu Thr Ala Leu Ala
                    50                      55                      60

gcc caa cag cag gcc gca ggg aag gag gag aag agc aat ggc aga gag      240
Ala Gln Gln Gln Ala Ala Gly Lys Glu Glu Lys Ser Asn Gly Arg Glu
                    65                      70                      75

caa gat ttg ccg ctg gca gag gca gta cgg ccc aaa acg cca ccc gtt      288
Gln Asp Leu Pro Leu Ala Glu Ala Val Arg Pro Lys Thr Pro Pro Val
                    80                      85                      90

gta atc aaa tct cag ctt aaa act caa gag gat gag gaa gaa att tct      336
Val Ile Lys Ser Gln Leu Lys Thr Gln Glu Asp Glu Glu Glu Ile Ser
                    95                      100                      105                      110

act agc cca ggt gtt tct gag ttt gtc agt gat gcc ttc gat gcc tgt      384
Thr Ser Pro Gly Val Ser Glu Phe Val Ser Asp Ala Phe Asp Ala Cys
                    115                      120                      125

aac cta aat cag gaa gat cta agg aaa gaa atg gag caa cta gtg ctt      432
Asn Leu Asn Gln Glu Asp Leu Arg Lys Glu Met Glu Gln Leu Val Leu
                    130                      135                      140

gac aaa aag caa gag gag aca gcc gta ctg gaa gag gat tct gca gat      480
Asp Lys Lys Gln Glu Glu Thr Ala Val Leu Glu Glu Asp Ser Ala Asp
                    145                      150                      155

tgg gaa aaa gaa ctg cag cag gaa ctt caa gaa tat gaa gtg gtg aca      528
Trp Glu Lys Glu Leu Gln Gln Glu Leu Gln Glu Tyr Glu Val Val Thr
                    160                      165                      170

gaa tct gaa aaa cga gat gaa aac tgg gat aag gaa ata gag aaa atg      576
Glu Ser Glu Lys Arg Asp Glu Asn Trp Asp Lys Glu Ile Glu Lys Met
                    175                      180                      185                      190

ctt caa gag gaa aat tag ctgttc ctgaaataga agaataatcc ttaacagtct      630
Leu Gln Glu Glu Asn *
                    195

gcaaactgac attaaattct agatgttgac aattactgaa tcagaaggca tgaaagagta      690

taattttatg aaattcaaaa ttattctttt ttcaagttga aacttgccctc ttctacttta      750

aaaaagtata tagaacagtt acttctaata atcagaaaga gatgttttat agaacatttc      810

tttaatatata agttagagat gtcttcataag gcagtatggc tatctttgcc acagaaacat      870

aagtaaaatt ttagagttct gttttccatg aggtcaaaaa tataatttat tcctcaaaaa      930

aaaaaa                                                                936

```

<210> 892
 <211> 2124
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (235) .. (1980)

<400> 892
 ggagttgaga attagggagg aggtggtaga gtccgggtag tgagcggagg gacaggaagg 60
 gtagggcaag aaagggagag gggacaggag ggaagggtag gccaaagcgg tgagaaagga 120
 gggccagcca gttgggtggg ggagagggcc gagggccggg ggcaggagtg cagggctctg 180
 aggcgggggag aggagaggag agaagagccg cggggggccc agcccggagc cagg atg 237
 Met
 1
 ccc gcg ccg cgc gcc cgg gag cag ccc cgc gtg ccc ggg gag cgc cag 285
 Pro Ala Pro Arg Ala Arg Glu Gln Pro Arg Val Pro Gly Glu Arg Gln
 5 10 15
 ccg ctg ctg cct cgc ggt gcg cgg ggc cct cga cgg tgg cgg cgg gcg 333
 Pro Leu Leu Pro Arg Gly Ala Arg Gly Pro Arg Arg Trp Arg Arg Ala
 20 25 30
 gcg ggc gcg gcc gtg ctg ctg gtg gag atg ctg gag cgc gcc gcc ttc 381
 Ala Gly Ala Ala Val Leu Leu Val Glu Met Leu Glu Arg Ala Ala Phe
 35 40 45
 ttc ggc gtc acc gcc aac ctc gtg ctg tac ctc aac agc acc aac ttc 429
 Phe Gly Val Thr Ala Asn Leu Val Leu Tyr Leu Asn Ser Thr Asn Phe
 50 55 60 65
 aac tgg acc ggc gag cag gcg acg cgc gcc gcg ctg gta ttc ctg ggc 477
 Asn Trp Thr Gly Glu Gln Ala Thr Arg Ala Leu Val Phe Leu Gly
 70 75 80
 gcc tcc tac ctg ctg gcg ccc gtg ggc ggc tgg ctg gcc gac gtg tac 525
 Ala Ser Tyr Leu Leu Ala Pro Val Gly Gly Trp Leu Ala Asp Val Tyr
 85 90 95
 ctg ggc cgc tac cgc gcg gtc gcg ctc agc ctg ctg ctc tac ctg gcc 573
 Leu Gly Arg Tyr Arg Ala Val Ala Leu Ser Leu Leu Leu Tyr Leu Ala
 100 105 110
 gcc tcg ggc ctg ctg ccc gcc acc gcc ttc ccc gac ggc cgc agc tcc 621
 Ala Ser Gly Leu Leu Pro Ala Thr Ala Phe Pro Asp Gly Arg Ser Ser
 115 120 125
 ttc tgc gga gag atg ccc gcg tcg ccg ctg gga cct gcc tgc ccc tcg 669
 Phe Cys Gly Glu Met Pro Ala Ser Pro Leu Gly Pro Ala Cys Pro Ser
 130 135 140 145
 gcc ggc tgc ccg cgc tcc tcg ccc agc ccc tac tgc gcg ccc gtc ctc 717
 Ala Gly Cys Pro Arg Ser Ser Pro Ser Tyr Cys Ala Pro Val Leu
 150 155 160
 tac gcg ggc ctg ctg cta ctc ggc ctg gcc gcc agc tcc gtc cgg agc 765
 Tyr Ala Gly Leu Leu Leu Leu Gly Leu Ala Ala Ser Ser Val Arg Ser
 165 170 175
 aac ctc acc tcc ttc ggt gcc gac cag gtg atg gat ctc ggc cgc gac 813
 Asn Leu Thr Ser Phe Gly Ala Asp Gln Val Met Asp Leu Gly Arg Asp
 180 185 190
 gcc acc cgc cgc ttc ttc aac tgg ttt tac tgg agc atc aac ctg ggt 861
 Ala Thr Arg Arg Phe Phe Asn Trp Phe Tyr Trp Ser Ile Asn Leu Gly
 195 200 205
 gct gtg ctg tcg ctg ctg gtg gtg gcg ttt att cag cag aac atc agc 909

Ala Val Leu Ser Leu Leu Val Val Ala Phe Ile Gln Gln Asn Ile Ser	
210 215 220 225	
ttc ctg ctg ggc tac agc atc cct gtg ggc tgt gtg ggc ctg gca ttt	957
Phe Leu Leu Gly Tyr Ser Ile Pro Val Gly Cys Val Gly Leu Ala Phe	
230 235 240	
ttc atc ttc ctc ttt gcc acc ccc gtc ttc atc acc aag ccc ccg atg	1005
Phe Ile Phe Leu Phe Ala Thr Pro Val Phe Ile Thr Lys Pro Pro Met	
245 250 255	
ggc agc caa gtg tcc tct atg ctt aag ctc gct ctc caa aac tgc tgc	1053
Gly Ser Gln Val Ser Ser Met Leu Lys Leu Ala Leu Gln Asn Cys Cys	
260 265 270	
ccc cag ctg tgg caa cga cac tcg gcc aga gac cgt caa tgt gcc cgc	1101
Pro Gln Leu Trp Gln Arg His Ser Ala Arg Asp Arg Gln Cys Ala Arg	
275 280 285	
gtg ctg gcc gac gag agg tct ccc cag cca ggg gct tcc ccg caa gag	1149
Val Leu Ala Asp Glu Arg Ser Pro Gln Pro Gly Ala Ser Pro Gln Glu	
290 295 300 305	
gac atc gcc aac ttc cag gtg ctg gtg aag atc ttg ccc gtc atg gtg	1197
Asp Ile Ala Asn Phe Gln Val Leu Val Lys Ile Leu Pro Val Met Val	
310 315 320	
acc ctg gtg ccc tac tgg atg gtc tac ttc cag atg cag tcc acc tat	1245
Thr Leu Val Pro Tyr Trp Met Val Tyr Phe Gln Met Gln Ser Thr Tyr	
325 330 335	
gtc ctg cag ggt ctt cac ctc cac atc cca aac att ttc cca gcc aac	1293
Val Leu Gln Gly Leu His Leu His Ile Pro Asn Ile Phe Pro Ala Asn	
340 345 350	
ccg gcc aac atc tct gtg gcc ctg aga gcc cag ggc agc agc tac acg	1341
Pro Ala Asn Ile Ser Val Ala Leu Arg Ala Gln Gly Ser Ser Tyr Thr	
355 360 365	
atc ccg gaa gcc tgg ctc ctc ctg gcc aat gtt gtg gtg ctg att	1389
Ile Pro Glu Ala Trp Leu Leu Leu Ala Asn Val Val Val Val Leu Ile	
370 375 380 385	
ctg gtc cct ctg aag gac cgc ttg atc gac cct tta ctg ctg cgg tgc	1437
Leu Val Pro Leu Lys Asp Arg Leu Ile Asp Pro Leu Leu Leu Arg Cys	
390 395 400	
aag ctg ctt ccc tct gct ctg cag aag atg gcg ctg ggg atg ttc ttt	1485
Lys Leu Leu Pro Ser Ala Leu Gln Lys Met Ala Leu Gly Met Phe Phe	
405 410 415	
ggt ttt acc tcc gtc att gtg gca gga gtc ctg gag atg gag cgc tta	1533
Gly Phe Thr Ser Val Ile Val Ala Gly Val Leu Glu Met Glu Arg Leu	
420 425 430	
cac tac atc cac cac aac gag acc gtg tcc cag cag att ggg gag gtc	1581
His Tyr Ile His His Asn Glu Thr Val Ser Gln Gln Ile Gly Glu Val	
435 440 445	
ctg tac aac gcg gca cca ctg tcc atc tgg tgg cag atc cct cag tac	1629
Leu Tyr Asn Ala Ala Pro Leu Ser Ile Trp Trp Gln Ile Pro Gln Tyr	
450 455 460 465	
ctg ctc att ggg atc agt gag atc ttt gcc agc atc cca ggc ctg gag	1677

Leu Leu Ile Gly Ile Ser Glu Ile Phe Ala Ser Ile Pro Gly Leu Glu
 470 475 480
 ttt gcc tac tca gag gcc ccg cgc tcc atg cag gcc gcc atc atg gcc 1725
 Phe Ala Tyr Ser Glu Ala Pro Arg Ser Met Gln Gly Ala Ile Met Gly
 485 490 495
 atc ttc ttc tgc ctg tgc ggg gtg ggc tca ctg ttg gcc tcc agc cta 1773
 Ile Phe Phe Cys Leu Ser Gly Val Gly Ser Leu Leu Gly Ser Ser Leu
 500 505 510
 gtg gca ctg ctg tcc ttg ccc ggg ggc tgg ctg cac tgc ccc aag gac 1821
 Val Ala Leu Leu Ser Leu Pro Gly Gly Trp Leu His Cys Pro Lys Asp
 515 520 525
 ttt ggg aac atc aac aat tgc cgg atg gac ctc tac ttc ttc ctg ctg 1869
 Phe Gly Asn Ile Asn Asn Cys Arg Met Asp Leu Tyr Phe Phe Leu Leu
 530 535 540 545
 gct ggc att cag gcc gtc acg gct ctc cta ttt gtc tgg atc gct gga 1917
 Ala Gly Ile Gln Ala Val Thr Ala Leu Leu Phe Val Trp Ile Ala Gly
 550 555 560
 cgc tat gag agg gcg tcc cag gcc cca gcc tcc cac agc cgt ttc agc 1965
 Arg Tyr Glu Arg Ala Ser Gln Gly Pro Ala Ser His Ser Arg Phe Ser
 565 570 575
 agg gac agg ggc tga acaggcccta ttccagcccc cttgcttcac tctaccggac 2020
 Arg Asp Arg Gly *
 580
 agacggcagc agtcccagct ctggtttcct tctcggttta ttctgttaga atgaaatggt 2080
 tcccataaat aaggggcatg agcccttcct caaaaaaaaaaaaa 2124

<210> 893
 <211> 3495
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (181)..(2793)

<400> 893
 ccgggaaccg agttcgtggc tgcggctgag gcggcgggcg cgcgccgctt ctgttgaggt 60
 tgccgggggcc gcgcgcgctg atctgcgagt gaagaggggac gagggaaaag aaacaaagcc 120
 acagacgcaa cttgagactc ccgcatccca aaagaagcac cagatcagca aaaaaagaag 180
 atg ggc ccc ccg agc ctc gtg ctg tgc ttg ctg tcc gca act gtg ttc 228
 Met Gly Pro Pro Ser Leu Val Leu Cys Leu Leu Ser Ala Thr Val Phe
 1 5 10 15
 tcc ctg ctg ggt gga agc tgc gcc ttc ctg tgc cac cac cgc ctg aaa 276
 Ser Leu Leu Gly Gly Ser Ser Ala Phe Leu Ser His His Arg Leu Lys
 20 25 30
 ggc agg ttt cag agg gac cgc agg aac atc cgc ccc aac atc atc ctg 324
 Gly Arg Phe Gln Arg Asp Arg Arg Asn Ile Arg Pro Asn Ile Ile Leu

35	40	45	
gtg ctg acg gac gac cag gat gtg gag ctg ggt tcc atg cag gtg atg Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser Met Gln Val Met 50 55 60			372
aac aag acc cgg cgc atc atg gag cag ggc ggg gcg cac ttc atc aac Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly Ala His Phe Ile Asn 65 70 75 80			420
gcc ttc gtg acc aca ccc atg tgc tgc ccc tca cgc tcc tcc atc ctc Ala Phe Val Thr Thr Pro Met Cys Cys Pro Ser Arg Ser Ser Ile Leu 85 90 95			468
acc ggc aag tac gtc cac aac cac aac acc tac acc aac aat gag aac Thr Gly Lys Tyr Val His Asn His Asn Thr Tyr Thr Asn Asn Glu Asn 100 105 110			516
tgc tcc tcg ccc tcc tgg cag gca cag cac gag agc cgc acc ttt gcc Cys Ser Ser Pro Ser Trp Gln Ala Gln His Glu Ser Arg Thr Phe Ala 115 120 125			564
gtg tac ctc aat agc act ggc tac cgg aca gct ttc ttc ggg aag tat Val Tyr Leu Asn Ser Thr Gly Tyr Arg Thr Ala Phe Phe Gly Lys Tyr 130 135 140			612
ctt aat gaa tac aac ggc tcc tac gtg cca ccc ggc tgg aag gag tgg Leu Asn Glu Tyr Asn Gly Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp 145 150 155 160			660
gtc gga ctc ctt aaa aac tcc cgc ttt tat aac tac acg ctg tgt cgg Val Gly Leu Leu Lys Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg 165 170 175			708
aac ggg gtg aaa gag aag cac ggc tcc gac tac tcc aag gat tac ctc Asn Gly Val Lys Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu 180 185 190			756
aca gac ctc atc acc aat gac agc gtg agc ttc ttc cgc acg tcc aag Thr Asp Leu Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys 195 200 205			804
aag atg tac ccg cac agg cca gtc ctc atg gtc atc agc cat gca gcc Lys Met Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala 210 215 220			852
ccc cac ggc cct gag gat tca gcc cca caa tat tca cgc ctc ttc cca Pro His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro 225 230 235 240			900
aac gca tct cag cac atc acg ccg agc tac aac tac gcg ccc aac ccg Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn Pro 245 250 255			948
gac aaa cac tgg atc atg cgc tac acg ggg ccc atg aag ccc atc cac Asp Lys His Trp Ile Met Arg Tyr Thr Gly Pro Met Lys Pro Ile His 260 265 270			996
atg gaa ttc acc aac atg ctc cag cgg aag cgc ttg cag acc ctc atg Met Glu Phe Thr Asn Met Leu Gln Arg Lys Arg Leu Gln Thr Leu Met 275 280 285			1044
tcg gtg gac gac tcc atg gag acg att tac aac atg ctg gtt gag acg Ser Val Asp Asp Ser Met Glu Thr Ile Tyr Asn Met Leu Val Glu Thr 290 295 300			1092

290	295	300	
ggc gag ctg gac aac acg tac atc gta tac acc gcc gac cac ggt tac Gly Glu Leu Asp Asn Thr Tyr Ile Val Tyr Thr Ala Asp His Gly Tyr 305 310 315 320			1140
cac atc ggc cag ttt ggc ctg gtg aaa ggg aaa tcc atg cca tat gag His Ile Gly Gln Phe Gly Leu Val Lys Gly Lys Ser Met Pro Tyr Glu 325 330 335			1188
ttt gac atc agg gtc ccg ttc tac gtg agg ggc ccc aac gtg gaa gcc Phe Asp Ile Arg Val Pro Phe Tyr Val Arg Gly Pro Asn Val Glu Ala 340 345 350			1236
ggc tgt ctg aat ccc cac atc gtc ctc aac att gac ctg gcc ccc acc Gly Cys Leu Asn Pro His Ile Val Leu Asn Ile Asp Leu Ala Pro Thr 355 360 365			1284
atc ctg gac att gca ggc ctg gac ata cct gcg gat atg gac ggg aaa Ile Leu Asp Ile Ala Gly Leu Asp Ile Pro Ala Asp Met Asp Gly Lys 370 375 380			1332
tcc atc ctc aag ctg ctg gac acg gag cgg ccg gtg aat cgg ttt cac Ser Ile Leu Lys Leu Leu Asp Thr Glu Arg Pro Val Asn Arg Phe His 385 390 395 400			1380
ttg aaa aag aag atg agg gtc tgg cgg gac tcc ttc ttg gtg gag aga Leu Lys Lys Lys Met Arg Val Trp Arg Asp Ser Phe Leu Val Glu Arg 405 410 415			1428
ggc aag ctg cta cac aag aga gac aat gac aag gtg gac gcc cag gag Gly Lys Leu Leu His Lys Arg Asp Asn Asp Lys Val Asp Ala Gln Glu 420 425 430			1476
gag aac ttt ctg ccc aag tac cag cgt gtg aag gac ctg tgt cag cgt Glu Asn Phe Leu Pro Lys Tyr Gln Arg Val Lys Asp Leu Cys Gln Arg 435 440 445			1524
gct gag tac cag acg gcg tgt gag cag ctg gga cag aag tgg cag tgt Ala Glu Tyr Gln Thr Ala Cys Glu Gln Leu Gly Gln Lys Trp Gln Cys 450 455 460			1572
gtg gag gac gcc acg ggg aag ctg aag ctg cat aag tgc aag ggc ccc Val Glu Asp Ala Thr Gly Lys Leu Lys Leu His Lys Cys Lys Gly Pro 465 470 475 480			1620
atg cgg ctg ggc ggc agc aga gcc ctc tcc aac ctc gtg ccc aag tac Met Arg Leu Gly Gly Ser Arg Ala Leu Ser Asn Leu Val Pro Lys Tyr 485 490 495			1668
tac ggg cag ggc agc gag gcc tgc acc tgt gac agc ggg gac tac aag Tyr Gly Gln Gly Ser Glu Ala Cys Thr Cys Asp Ser Gly Asp Tyr Lys 500 505 510			1716
ctc agc ctg gcc gga cgc cgg aaa aaa ctc ttc aag aag aag tac aag Leu Ser Leu Ala Gly Arg Arg Lys Lys Leu Phe Lys Lys Lys Tyr Lys 515 520 525			1764
gcc agc tat gtc cgc agt cgc tcc atc cgc tca gtg gcc atc gag gtg Ala Ser Tyr Val Arg Ser Arg Ser Ile Arg Ser Val Ala Ile Glu Val 530 535 540			1812
gac ggc agg gtg tac cac gta ggc ctg ggt gat gcc gcc cag ccc cga Asp Gly Arg Val Tyr His Val Gly Leu Gly Asp Ala Ala Gln Pro Arg			1860

545	550	555	560	
aac ctc acc aag cgg cac tgg cca ggg gcc cct gag gac caa gat gac				1908
Asn Leu Thr Lys Arg His Trp Pro Gly Ala Pro Glu Asp Gln Asp Asp				
	565	570	575	
aag gat ggt ggg gac ttc agt ggc act gga ggc ctt ccc gac tac tca				1956
Lys Asp Gly Gly Asp Phe Ser Gly Thr Gly Gly Leu Pro Asp Tyr Ser				
	580	585	590	
gcc gcc aac ccc att aaa gtg aca cat cgg tgc tac atc cta gag aac				2004
Ala Ala Asn Pro Ile Lys Val Thr His Arg Cys Tyr Ile Leu Glu Asn				
	595	600	605	
gac aca gtc cag tgt gac ctg gac ctg tac aag tcc ctg cag gcc tgg				2052
Asp Thr Val Gln Cys Asp Leu Asp Leu Tyr Lys Ser Leu Gln Ala Trp				
	610	615	620	
aaa gac cac aag ctg cac atc gac cac gag att gaa acc ctg cag aac				2100
Lys Asp His Lys Leu His Ile Asp His Glu Ile Glu Thr Leu Gln Asn				
	625	630	635	640
aaa att aag aac ctg agg gaa gtc cga ggt cac ctg aag aaa aag cgg				2148
Lys Ile Lys Asn Leu Arg Glu Val Arg Gly His Leu Lys Lys Lys Arg				
	645	650	655	
cca gaa gaa tgt gac tgt cac aaa atc agc tac cac acc cag cac aaa				2196
Pro Glu Glu Cys Asp Cys His Lys Ile Ser Tyr His Thr Gln His Lys				
	660	665	670	
ggc cgc ctc aag cac aga ggc tcc agt ctg cat cct ttc agg aag ggc				2244
Gly Arg Leu Lys His Arg Gly Ser Ser Leu His Pro Phe Arg Lys Gly				
	675	680	685	
ctg caa gag aag gac aag gtg tgg ctg ttg cgg gag cag aag cgc aag				2292
Leu Gln Glu Lys Asp Lys Val Trp Leu Leu Arg Glu Gln Lys Arg Lys				
	690	695	700	
aag aaa ctc cgc aag ctg ctc aag cgc ctg cag aac aac gac acg tgc				2340
Lys Lys Leu Arg Lys Leu Leu Lys Arg Leu Gln Asn Asn Asp Thr Cys				
	705	710	715	720
agc atg cca ggc ctc acg tgc ttc acc cac gac aac cag cac tgg cag				2388
Ser Met Pro Gly Leu Thr Cys Phe Thr His Asp Asn Gln His Trp Gln				
	725	730	735	
acg gcg cct ttc tgg aca ctg ggg cct ttc tgt gcc tgc acc agc gcc				2436
Thr Ala Pro Phe Trp Thr Leu Gly Pro Phe Cys Ala Cys Thr Ser Ala				
	740	745	750	
aac aat aac acg tac tgg tgc atg agg acc atc aat gag act cac aat				2484
Asn Asn Asn Thr Tyr Trp Cys Met Arg Thr Ile Asn Glu Thr His Asn				
	755	760	765	
ttc ctc ttc tgt gaa ttt gca act ggc ttc cta gag tac ttt gat ctc				2532
Phe Leu Phe Cys Glu Phe Ala Thr Gly Phe Leu Glu Tyr Phe Asp Leu				
	770	775	780	
aac aca gac ccc tac cag ctg atg aat gca gtg aac aca ctg gac agg				2580
Asn Thr Asp Pro Tyr Gln Leu Met Asn Ala Val Asn Thr Leu Asp Arg				
	785	790	795	800
gat gtc ctc aac cag cta cac gta cag ctc atg gag ctg agg agc tgc				2628
Asp Val Leu Asn Gln Leu His Val Gln Leu Met Glu Leu Arg Ser Cys				

805	810	815	
aag ggt tac aag cag tgt aac ccc cgg act cga aac atg gac ctg gga			2676
Lys Gly Tyr Lys Gln Cys Asn Pro Arg Thr Arg Asn Met Asp Leu Gly			
820	825	830	
ctt aaa gat gga gga agc tat gag caa tac agg cag ttt cag cgt cga			2724
Leu Lys Asp Gly Gly Ser Tyr Glu Gln Tyr Arg Gln Phe Gln Arg Arg			
835	840	845	
aag tgg cca gaa atg aag aga cct tct tcc aaa tca ctg gga caa ctg			2772
Lys Trp Pro Glu Met Lys Arg Pro Ser Ser Lys Ser Leu Gly Gln Leu			
850	855	860	
tgg gaa ggc tgg gaa ggt taa ga aacaacagag gtggacctcc aaaaacatag			2825
Trp Glu Gly Trp Glu Gly *			
865	870		
aggcatcacc tgactgcaca ggcaatgaaa aaccatgtgg gtgatttcca gcagacctgt			2885
gctattggcc aggaggcctg agaaagcaag cacgcactct cagtcaacat gacagattct			2945
ggaggataac cagcaggagc agagataact tcaggaagtc catttttgcc cctgcttttg			3005
ctttggatta tacctacca gctgcacaaa atgcattttt tcgtatcaaa aagtcaccac			3065
taaccctccc ccagaagctc acaaaggaaa acggagagag cgagcgagag agatttcctt			3125
ggaaatttct cccaaggcg aaagtcattg gaatttttaa atcatagggg aaaagcagtc			3185
ctgttctaaa tcctcttatt cttttggttt gtcacaaaga aggaactaag aagcaggaca			3245
gaggcaacgt ggagaggctg aaaacagtgc agagacgttt gacaatgagt cagtagcaca			3305
aaagagatga catttaccta gactataaaa ccctggttgc ctctgaagaa actgccttca			3365
ttgtatatat gtgactatatt acatgtaatc aacatgggaa cttttagggg aacctaataa			3425
gaaatcccaa ttttcaggag tggtggtgtc aataaacgct ctgtggccag tgtaaaagaa			3485
aaaaaaaa			3495

<210> 894
 <211> 3435
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (181)..(2733)

<400> 894	
ccgggaaccg agttcgtggc tgcggctgag gcggcggcgg cgcgccgctt ctgttgaggt	60
tgccgggggc gcgcgcgctg atctgcgagt gaagagggac gagggaaaag aaacaaagcc	120
acagacgcaa cttgagactc ccgcacccca aaagaagcac cagatcagca aaaaaagaag	180
atg ggc ccc ccg agc ctc gtg ctg tgc ttg ctg tcc gca act gtg ttc	228
Met Gly Pro Pro Ser Leu Val Leu Cys Leu Ser Ala Thr Val Phe	
1 5 10 15	

tcc ctg ctg ggt gga agc tgc gcc ttc ctg tgc cac cac cgc ctg aaa	276
Ser Leu Leu Gly Gly Ser Ser Ala Phe Leu Ser His His Arg Leu Lys	
20 25 30	
ggc agg ttt cag agg gac cgc agg aac atc cgc ccc aac atc atc ctg	324
Gly Arg Phe Gln Arg Asp Arg Arg Asn Ile Arg Pro Asn Ile Ile Leu	
35 40 45	
gtg ctg acg gac gac cag gat gtg gag ctg ggt tcc atg cag gtg atg	372
Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser Met Gln Val Met	
50 55 60	
aac aag acc cgg cgc atc atg gag cag ggc ggg gcg cac ttc atc aac	420
Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Ala His Phe Ile Asn	
65 70 75 80	
gcc ttc gtg acc aca ccc atg tgc tgc ccc tca cgc tcc tcc atc ctc	468
Ala Phe Val Thr Thr Pro Met Cys Cys Pro Ser Arg Ser Ser Ile Leu	
85 90 95	
acc ggc aag tac gtc cac aac cac aac acc tac acc aac aat gag aac	516
Thr Gly Lys Tyr Val His Asn His Asn Thr Tyr Thr Asn Asn Glu Asn	
100 105 110	
tgc tcc tgc ccc tcc tgg cag gca cag cac gag agc cgc acc ttt gcc	564
Cys Ser Ser Pro Ser Trp Gln Ala Gln His Glu Ser Arg Thr Phe Ala	
115 120 125	
gtg tac ctc aat agc act ggc tac cgg aca gct ttc ttc ggg aag tat	612
Val Tyr Leu Asn Ser Thr Gly Tyr Arg Thr Ala Phe Phe Gly Lys Tyr	
130 135 140	
ctt aat gaa tac aac ggc tcc tac gtg cca ccc ggc tgg aag gag tgg	660
Leu Asn Glu Tyr Asn Gly Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp	
145 150 155 160	
gtc gga ctc ctt aaa aac tcc cgc ttt tat aac tac acg ctg tgt cgg	708
Val Gly Leu Leu Lys Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg	
165 170 175	
aac ggg gtg aaa gag aag cac ggc tcc gac tac tcc aag gat tac ctc	756
Asn Gly Val Lys Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu	
180 185 190	
aca gac ctc atc acc aat gac agc gtg agc ttc ttc cgc acg tcc aag	804
Thr Asp Leu Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys	
195 200 205	
aag atg tac ccg cac agg cca gtc ctc atg gtc atc agc cat gca gcc	852
Lys Met Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala	
210 215 220	
ccc cac ggc cct gag gat tca gcc cca caa tat tca cgc ctc ttc cca	900
Pro His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro	
225 230 235 240	
aac gca tct cag cac atc acg ccg agc tac aac tac gcg ccc aac ccg	948
Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn Pro	
245 250 255	
gac aaa cac tgg atc atg cgc tac acg ggg ccc atg aag ccc atc cac	996
Asp Lys His Trp Ile Met Arg Tyr Thr Gly Pro Met Lys Pro Ile His	
260 265 270	

atg gaa ttc acc aac atg ctc cag cgg aag cgc ttg cag acc ctc atg Met Glu Phe Thr Asn Met Leu Gln Arg Lys Arg Leu Gln Thr Leu Met 275 280 285	1044
tcg gtg gac gac tcc atg gag acg att tac aac atg ctg gtt gag acg Ser Val Asp Asp Ser Met Glu Thr Ile Tyr Asn Met Leu Val Glu Thr 290 295 300	1092
ggc gag ctg gac aac acg tac atc gta tac acc gcc gac cac ggt tac Gly Glu Leu Asp Asn Thr Tyr Ile Val Tyr Thr Ala Asp His Gly Tyr 305 310 315 320	1140
cac atc ggc cag ttt ggc ctg gtg aaa ggg aaa tcc atg cca tat gag His Ile Gly Gln Phe Gly Leu Val Lys Gly Lys Ser Met Pro Tyr Glu 325 330 335	1188
ttt gac atc agg gtc ccg ttc tac gtg agg ggc ccc aac gtg gaa gcc Phe Asp Ile Arg Val Pro Phe Tyr Val Arg Gly Pro Asn Val Glu Ala 340 345 350	1236
ggc tgt ctg aat ccc cac atc gtc ctc aac att gac ctg gcc ccc acc Gly Cys Leu Asn Pro His Ile Val Leu Asn Ile Asp Leu Ala Pro Thr 355 360 365	1284
atc ctg gac att gca ggc ctg gac ata cct gcg gat atg gac ggg aaa Ile Leu Asp Ile Ala Gly Leu Asp Ile Pro Ala Asp Met Asp Gly Lys 370 375 380	1332
tcc atc ctc aag ctg ctg gac acg gag cgg ccg gtg aat cgg ttt cac Ser Ile Leu Lys Leu Leu Asp Thr Glu Arg Pro Val Asn Arg Phe His 385 390 395 400	1380
ttg aaa aag aag atg agg gtc tgg cgg gac tcc ttc ttg gtg gag aga Leu Lys Lys Lys Met Arg Val Trp Arg Asp Ser Phe Leu Val Glu Arg 405 410 415	1428
ggc aag ctg cta cac aag aga gac aat gac aag gtg gac gcc cag gag Gly Lys Leu Leu His Lys Arg Asp Asn Asp Lys Val Asp Ala Gln Glu 420 425 430	1476
gag aac ttt ctg ccc aag tac cag cgt gtg aag gac ctg tgt cag cgt Glu Asn Phe Leu Pro Lys Tyr Gln Arg Val Lys Asp Leu Cys Gln Arg 435 440 445	1524
gct gag tac cag acg gcg tgt gag cag ctg gga cag aag tgg cag tgt Ala Glu Tyr Gln Thr Ala Cys Glu Gln Leu Gly Gln Lys Trp Gln Cys 450 455 460	1572
gtg gag gac gcc acg ggg aag ctg aag ctg cat aag tgc aag ggc ccc Val Glu Asp Ala Thr Gly Lys Leu Lys Leu His Lys Cys Lys Gly Pro 465 470 475 480	1620
atg cgg ctg ggc ggc agc aga gcc ctc tcc aac ctc gtg ccc aag tac Met Arg Leu Gly Gly Ser Arg Ala Leu Ser Asn Leu Val Pro Lys Tyr 485 490 495	1668
tac ggg cag ggc agc gag gcc tgc acc tgt gac agc ggg gac tac aag Tyr Gly Gln Gly Ser Glu Ala Cys Thr Cys Asp Ser Gly Asp Tyr Lys 500 505 510	1716
ctc agc ctg gcc gga cgc cgg aaa aaa ctc ttc aag aag aag tac aag Leu Ser Leu Ala Gly Arg Arg Lys Lys Leu Phe Lys Lys Lys Tyr Lys 515 520 525	1764

gcc agc tat gtc cgc agt cgc tcc atc cgc tca gtg gcc atc gag gtg Ala Ser Tyr Val Arg Ser Arg Ser Ile Arg Ser Val Ala Ile Glu Val 530 535 540	1812
gac ggc agg gtg tac cac gta ggc ctg ggt gat gcc gcc cag ccc cga Asp Gly Arg Val Tyr His Val Gly Leu Gly Asp Ala Ala Gln Pro Arg 545 550 555 560	1860
aac ctc acc aag cgg cac tgg cca ggg gcc cct gag gac caa gat gac Asn Leu Thr Lys Arg His Trp Pro Gly Ala Pro Glu Asp Gln Asp Asp 565 570 575	1908
aag gat ggt ggg gac ttc agt ggc act gga ggc ctt ccc gac tac tca Lys Asp Gly Gly Asp Phe Ser Gly Thr Gly Gly Leu Pro Asp Tyr Ser 580 585 590	1956
gcc gcc aac ccc att aaa gtg aca cat cgg tgc tac atc cta gag aac Ala Ala Asn Pro Ile Lys Val Thr His Arg Cys Tyr Ile Leu Glu Asn 595 600 605	2004
gac aca gtc cag tgt gac ctg gac ctg tac aag tcc ctg cag gcc tgg Asp Thr Val Gln Cys Asp Leu Asp Leu Tyr Lys Ser Leu Gln Ala Trp 610 615 620	2052
aaa gac cac aag ctg cac atc gac cac gag att gaa acc ctg cag aac Lys Asp His Lys Leu His Ile Asp His Glu Ile Glu Thr Leu Gln Asn 625 630 635 640	2100
aaa att aag aac ctg agg gaa gtc cga ggt cac ctg aag aaa aag cgg Lys Ile Lys Asn Leu Arg Glu Val Arg Gly His Leu Lys Lys Lys Arg 645 650 655	2148
cca gaa gaa tgt gac tgt cac aaa atc agg aag ggc ctg caa gag aag Pro Glu Glu Cys Asp Cys His Lys Ile Arg Lys Gly Leu Gln Glu Lys 660 665 670	2196
gac aag gtg tgg ctg ttg cgg gag cag aag cgc aag aag aaa ctc cgc Asp Lys Val Trp Leu Leu Arg Glu Gln Lys Arg Lys Lys Lys Leu Arg 675 680 685	2244
aag ctg ctc aag cgc ctg cag aac aac gac acg tgc agc atg cca ggc Lys Leu Leu Lys Arg Leu Gln Asn Asn Asp Thr Cys Ser Met Pro Gly 690 695 700	2292
ctc acg tgc ttc acc cac gac aac cag cac tgg cag acg gcg cct ttc Leu Thr Cys Phe Thr His Asp Asn Gln His Trp Gln Thr Ala Pro Phe 705 710 715 720	2340
tgg aca ctg ggg cct ttc tgt gcc tgc acc agc gcc aac aat aac acg Trp Thr Leu Gly Pro Phe Cys Ala Cys Thr Ser Ala Asn Asn Asn Thr 725 730 735	2388
tac tgg tgc atg agg acc atc aat gag act cac aat ttc ctc ttc tgt Tyr Trp Cys Met Arg Thr Ile Asn Glu Thr His Asn Phe Leu Phe Cys 740 745 750	2436
gaa ttt gca act ggc ttc cta gag tac ttt gat ctc aac aca gac ccc Glu Phe Ala Thr Gly Phe Leu Glu Tyr Phe Asp Leu Asn Thr Asp Pro 755 760 765	2484
tac cag ctg atg aat gca gtg aac aca ctg gac agg gat gtc ctc aac Tyr Gln Leu Met Asn Ala Val Asn Thr Leu Asp Arg Asp Val Leu Asn 770 775 780	2532

```

cag cta cac gta cag ctc atg gag ctg agg agc tgc aag ggt tac aag      2580
Gln Leu His Val Gln Leu Met Glu Leu Arg Ser Cys Lys Gly Tyr Lys
785                      790                      795                      800

cag tgt aac ccc cgg act cga aac atg gac ctg gga ctt aaa gat gga      2628
Gln Cys Asn Pro Arg Thr Arg Asn Met Asp Leu Gly Leu Lys Asp Gly
805                      810                      815

gga agc tat gag caa tac agg cag ttt cag cgt cga aag tgg cca gaa      2676
Gly Ser Tyr Glu Gln Tyr Arg Gln Phe Gln Arg Arg Lys Trp Pro Glu
820                      825                      830

atg aag aga cct tct tcc aaa tca ctg gga caa ctg tgg gaa ggc tgg      2724
Met Lys Arg Pro Ser Ser Lys Ser Leu Gly Gln Leu Trp Glu Gly Trp
835                      840                      845

gaa ggt taa gaaacaa cagaggtgga cctccaaaaa catagaggca tcacctgact      2780
Glu Gly *
850

gcacaggcaa tgaaaaacca tgtgggtgat ttccagcaga cctgtgctat tggccaggag      2840

gcctgagaaa gcaagcacgc actctcagtc aacatgacag attctggagg ataaccagca      2900

ggagcagaga taacttcagg aagtccattt ttgccctgct ttttgctttg gattatacct      2960

caccagctgc acaaaatgca ttttttcgta tcaaaaagtc accactaacc ctcccccaga      3020

agctcacaaa ggaaaacgga gagagcgagc gagagagatt tccttggaaa tttctcccaa      3080

gggcgaaagt cattggaatt tttaaactcat aggggaaaag cagtctgtgt ctaaactctc      3140

ttattctttt ggtttgtcac aaagaaggaa ctaagaagca ggacagaggc aacgtggaga      3200

ggctgaaaac agtgcagaga cgtttgacaa tgagtcagta gcacaaaaga gatgacattt      3260

acctagcact ataaacctg gttgcctctg aagaaactgc cttcattgta tatatgtgac      3320

tatttacatg taatcaacat gggaaactttt aggggaacct aataagaaat cccaattttc      3380

aggagtgggtg gtgtcaataa acgctctgtg gccagtgtaa aagaaaaaaa aaaaa      3435

```

```

<210> 895
<211> 1260
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> CDS
<222> (1)..(1260)

```

```

<400> 895
atg gtc ttc tgg gca gtg ttg act gcg ttc cat acc ggg aca tcc aac      48
Met Val Phe Ser Ala Val Leu Thr Ala Phe His Thr Gly Thr Ser Asn
1                      5                      10                      15

aca aca ttt gtc gtg tat gaa aac acc tac atg aat att aca ctc cct      96
Thr Thr Phe Val Val Tyr Glu Asn Thr Tyr Met Asn Ile Thr Leu Pro
20                      25                      30

```

cca cca ttc cag cat cct gac ctc agt cca ttg ctt aga tat agt ttt Pro Pro Phe Gln His Pro Asp Leu Ser Pro Leu Leu Arg Tyr Ser Phe 35 40 45	144
gaa acc atg gct ccc act ggt ttg agt tcc ttg acc gtg aat agt aca Glu Thr Met Ala Pro Thr Gly Leu Ser Ser Leu Thr Val Asn Ser Thr 50 55 60	192
gct gtg ccc aca aca cca gca gca ttt aag agc cta aac ttg cct ctt Ala Val Pro Thr Thr Pro Ala Ala Phe Lys Ser Leu Asn Leu Pro Leu 65 70 75 80	240
cag atc acc ctt tct gct ata atg ata ttc att ctg ttt gtg tct ttt Gln Ile Thr Leu Ser Ala Ile Met Ile Phe Ile Leu Phe Val Ser Phe 85 90 95	288
ctt ggg aac ttg gtt gtt tgc ctc atg gtt tac caa aaa gct gcc atg Leu Gly Asn Leu Val Val Cys Leu Met Val Tyr Gln Lys Ala Ala Met 100 105 110	336
agg tct gca att aac atc ctc ctt gcc agc cta gct ttt gca gac atg Arg Ser Ala Ile Asn Ile Leu Leu Ala Ser Leu Ala Phe Ala Asp Met 115 120 125	384
ttg ctt gca gtg ctg aac atg ccc ttt gcc ctg gta act att ctt act Leu Leu Ala Val Leu Asn Met Pro Phe Ala Leu Val Thr Ile Leu Thr 130 135 140	432
acc cga tgg att ttt ggg aaa ttc ttc tgt agg gta tct gct atg ttt Thr Arg Trp Ile Phe Gly Lys Phe Phe Cys Arg Val Ser Ala Met Phe 145 150 155 160	480
ttc tgg tta ttt gtg ata gaa gga gta gcc atc ctg ctc atc att agc Phe Trp Leu Phe Val Ile Glu Gly Val Ala Ile Leu Leu Ile Ile Ser 165 170 175	528
ata gat agg ttc ctt att ata gtc cag agg cag gat aag cta aac cca Ile Asp Arg Phe Leu Ile Ile Val Gln Arg Gln Asp Lys Leu Asn Pro 180 185 190	576
tat aga gct aag gtt ctg att gca gtt tct tgg gca act tcc ttt tgt Tyr Arg Ala Lys Val Leu Ile Ala Val Ser Trp Ala Thr Ser Phe Cys 195 200 205	624
gta gct ttt cct tta gcc gta gga aac ccc gac ctg cag ata cct tcc Val Ala Phe Pro Leu Ala Val Gly Asn Pro Asp Leu Gln Ile Pro Ser 210 215 220	672
cga gct ccc cag tgt gtg ttt ggg tac aca acc aat cca ggc tac cag Arg Ala Pro Gln Cys Val Phe Gly Tyr Thr Thr Asn Pro Gly Tyr Gln 225 230 235 240	720
gct tat gtg att ttg att tct ctc att tct ttc ttc ata ccc ttc ctg Ala Tyr Val Ile Leu Ile Ser Leu Ile Ser Phe Phe Ile Pro Phe Leu 245 250 255	768
gta ata ctg tac tca ttt atg ggc ata ctc aac acc ctt cgg cac aat Val Ile Leu Tyr Ser Phe Met Gly Ile Leu Asn Thr Leu Arg His Asn 260 265 270	816
gcc ttg agg atc cat agc tac cct gaa ggt ata tgc ctc agc cag gcc Ala Leu Arg Ile His Ser Tyr Pro Glu Gly Ile Cys Leu Ser Gln Ala 275 280 285	864

```

agc aaa ctg ggt ctc atg agt ctg cag aga cct ttc cag atg agc att      912
Ser Lys Leu Gly Leu Met Ser Leu Gln Arg Pro Phe Gln Met Ser Ile
      290                      295                      300

gac atg ggc ttt aaa aca cgt gcc ttc acc act att ttg att ctc ttt      960
Asp Met Gly Phe Lys Thr Arg Ala Phe Thr Thr Ile Leu Ile Leu Phe
      305                      310                      315                      320

gct gtc ttc att gtc tgc tgg gcc cca ttc acc act tac agc ctt gtg      1008
Ala Val Phe Ile Val Cys Trp Ala Pro Phe Thr Thr Tyr Ser Leu Val
                      325                      330                      335

gca aca ttc agt aag cac ttt tac tat cag cac aac ttt ttt gag att      1056
Ala Thr Phe Ser Lys His Phe Tyr Tyr Gln His Asn Phe Phe Glu Ile
                      340                      345                      350

agc acc tgg cta ctg tgg ctc tgc tac ctc aag tct gca ttg aat ccg      1104
Ser Thr Trp Leu Leu Trp Leu Cys Tyr Leu Lys Ser Ala Leu Asn Pro
                      355                      360                      365

ctg atc tac tac tgg agg att aag aaa ttc cat gat gct tgc ctg gac      1152
Leu Ile Tyr Tyr Trp Arg Ile Lys Lys Phe His Asp Ala Cys Leu Asp
      370                      375                      380

atg atg cct aag tcc ttc aag ttt ttg ccg cag ctc cct ggt cac aca      1200
Met Met Pro Lys Ser Phe Lys Phe Leu Pro Gln Leu Pro Gly His Thr
      385                      390                      395                      400

aag cga cgg ata cgt cct agt gct gtc tat gtg tgt ggg gaa cat cgg      1248
Lys Arg Arg Ile Arg Pro Ser Ala Val Tyr Val Cys Gly Glu His Arg
                      405                      410                      415

acg gtg gtg tga      1260
Thr Val Val *
      420

```

<210> 896
 <211> 3836
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1) .. (2832)

```

<400> 896
atg gcg gcg gta gcg gca gtg gcg gcg cgt agg agg cgg tct tgg gcg      48
Met Ala Ala Val Ala Ala Val Ala Ala Arg Arg Arg Arg Ser Trp Ala
      1                      5                      10                      15

tct ttg gta ctg gct ttt tta ggg gtc tgc ctg ggg att acc ctt gct      96
Ser Leu Val Leu Ala Phe Leu Gly Val Cys Leu Gly Ile Thr Leu Ala
                      20                      25                      30

gtg gat aga agc aac ttt aag acc tgt gaa gag agt tct ttc tgc aag      144
Val Asp Arg Ser Asn Phe Lys Thr Cys Glu Glu Ser Ser Phe Cys Lys
                      35                      40                      45

cga cag aga agc ata cgg cca ggc ctc tct cca tac cga gcc ttg ctg      192
Arg Gln Arg Ser Ile Arg Pro Gly Leu Ser Pro Tyr Arg Ala Leu Leu

```

50	55	60	
gac tct cta cag ctt ggt cct gat tcc ctc acg gtc cat ctg atc cat			240
Asp Ser Leu Gln Leu Gly Pro Asp Ser Leu Thr Val His Leu Ile His			
65	70	75	80
gag gtc acc aag gtg ttg ctg gtg cta gag ctt cag ggg ctt caa aag			288
Glu Val Thr Lys Val Leu Leu Val Leu Glu Leu Gln Gly Leu Gln Lys			
	85	90	95
aac atg act cgg ttc agg att gat gag ctg gag cct cgg cga ccc cga			336
Asn Met Thr Arg Phe Arg Ile Asp Glu Leu Glu Pro Arg Arg Pro Arg			
	100	105	110
tac cgt gta cca gat gtt ttg gtg gct gat cca cca ata gcc cgg ctt			384
Tyr Arg Val Pro Asp Val Leu Val Ala Asp Pro Pro Ile Ala Arg Leu			
	115	120	125
tct gtc tct ggt cgt gat gag aac agt gtg gag tta acc atg gct gag			432
Ser Val Ser Gly Arg Asp Glu Asn Ser Val Glu Leu Thr Met Ala Glu			
	130	135	140
gga ccc tac aag atc atc ttg aca gca cgg cca ttc cgc ctt gac cta			480
Gly Pro Tyr Lys Ile Ile Leu Thr Ala Arg Pro Phe Arg Leu Asp Leu			
	145	150	155
cta gag gac cga agt ctt ttg ctt agt gtc aat gcc cga gga ctc ttg			528
Leu Glu Asp Arg Ser Leu Leu Ser Val Asn Ala Arg Gly Leu Leu			
	165	170	175
gag ttt gag cat cag agg gcc cct agg gtc tcg caa gga tca aaa gac			576
Glu Phe Glu His Gln Arg Ala Pro Arg Val Ser Gln Gly Ser Lys Asp			
	180	185	190
cca gct gag ggc gat ggg gcc cag cct gag gaa aca ccc agg gat ggc			624
Pro Ala Glu Gly Asp Gly Ala Gln Pro Glu Glu Thr Pro Arg Asp Gly			
	195	200	205
gac aag cca gag gag act cag ggg aag gca gag aaa gat gag cca gga			672
Asp Lys Pro Glu Glu Thr Gln Gly Lys Ala Glu Lys Asp Glu Pro Gly			
	210	215	220
gcc tgg gag gag aca ttc aaa act cac tct gac agc aag ccg tat ggc			720
Ala Trp Glu Glu Thr Phe Lys Thr His Ser Asp Ser Lys Pro Tyr Gly			
	225	230	235
ccc atg tct gtg ggt ttg gac ttc tct ctg cca ggc atg gag cat gtc			768
Pro Met Ser Val Gly Leu Asp Phe Ser Leu Pro Gly Met Glu His Val			
	245	250	255
tat ggg atc cct gag cat gca gac aac ctg agg ctg aag gtc act gag			816
Tyr Gly Ile Pro Glu His Ala Asp Asn Leu Arg Leu Lys Val Thr Glu			
	260	265	270
ggt ggg gag cca tat cgc ctc tac aat ttg gat gtg ttc cag tat gag			864
Gly Gly Glu Pro Tyr Arg Leu Tyr Asn Leu Asp Val Phe Gln Tyr Glu			
	275	280	285
ctg tac aac cca atg gcc ttg tat ggg tct gtg cct gtg ctc ctg gca			912
Leu Tyr Asn Pro Met Ala Leu Tyr Gly Ser Val Pro Val Leu Leu Ala			
	290	295	300
cac aac cct cat cgc gac ttg ggc atc ttc tgg ctc aat gct gca gag			960
His Asn Pro His Arg Asp Leu Gly Ile Phe Trp Leu Asn Ala Ala Glu			

305	310	315	320	
acc tgg gtt gat	ata tct tcc aac act	gcc ggg aag acc	ctg ttt ggg	1008
Thr Trp Val Asp	Ile Ser Ser Asn Thr	Ala Gly Lys Thr	Leu Phe Gly	
	325	330	335	
aag atg atg gac	tac ctg cag ggc tct	ggg gag acc cca	cag aca gat	1056
Lys Met Met Asp	Tyr Leu Gln Gly Ser	Gly Glu Thr Pro	Gln Thr Asp	
	340	345	350	
gtt cgc tgg atg	tca gag act ggc atc	att gac gtc ttc	ctg ctg ctg	1104
Val Arg Trp Met	Ser Glu Thr Gly Ile	Ile Asp Val Phe	Leu Leu Leu	
	355	360	365	
ggg ccc tcc atc	tct gat gtt ttc	cgg caa tat gct	agt ctc aca gga	1152
Gly Pro Ser Ile	Ser Asp Val Phe	Arg Gln Tyr Ala	Ser Leu Thr Gly	
	370	375	380	
acc cag gcg ttg	ccc cca ctc ttc	tcc ctc ggc tac	cac cag agc cgt	1200
Thr Gln Ala Leu	Pro Pro Leu Phe	Ser Leu Gly Tyr	His Gln Ser Arg	
	385	390	395	400
tgg aac tac cgg	gac gag gct gat	gtg ctg gaa gtg	gat cag ggc ttt	1248
Trp Asn Tyr Arg	Asp Glu Ala Asp	Val Leu Glu Val	Asp Gln Gly Phe	
	405	410	415	
gat gat cac aac	ctg ccc tgt gat	gtc atc tgg cta	gac att gaa cat	1296
Asp Asp His Asn	Leu Pro Cys Asp	Val Ile Trp Leu	Asp Ile Glu His	
	420	425	430	
gct gat ggc aag	cgg tat ttc acc	tgg gac ccc agt	cgc ttc cct cag	1344
Ala Asp Gly Lys	Arg Tyr Phe Thr	Trp Asp Pro Ser	Arg Phe Pro Gln	
	435	440	445	
ccc cgc acc atg	ctt gag cgc ttg	gct tct aag agg	cgg aag ctg gtg	1392
Pro Arg Thr Met	Leu Glu Arg Leu	Ala Ser Lys Arg	Arg Lys Leu Val	
	450	455	460	
gcc atc gta gac	ccc cac atc aag	gtg gac tcc ggc	tac cga gtt cac	1440
Ala Ile Val Asp	Pro His Ile Lys	Val Asp Ser Gly	Tyr Arg Val His	
	465	470	475	480
gag gag ctg cgg	aac ctg ggg ctg	tat gtt aaa acc	cgg gat ggc tct	1488
Glu Glu Leu Arg	Asn Leu Gly Leu	Tyr Val Lys Thr	Arg Asp Gly Ser	
	485	490	495	
gac tat gag ggc	tgg tgc tgg cca	ggc tca gct ggt	tac cct gac ttc	1536
Asp Tyr Glu Gly	Trp Cys Trp Pro	Gly Ser Ala Gly	Tyr Pro Asp Phe	
	500	505	510	
act aat ccc acg	atg agg gcc tgg	tgg gct aac atg	ttc agc tat gac	1584
Thr Asn Pro Thr	Met Arg Ala Trp	Trp Ala Asn Met	Phe Ser Tyr Asp	
	515	520	525	
aat tat gag ggc	tca gct ccc aac	ctc ttt gtc tgg	aat gac atg aac	1632
Asn Tyr Glu Gly	Ser Ala Pro Asn	Leu Phe Val Trp	Asn Asp Met Asn	
	530	535	540	
gaa cca tct gtg	ttc aat ggt cct	gag gtc acc atg	ctc aag gat gcc	1680
Glu Pro Ser Val	Phe Asn Gly Pro	Glu Val Thr Met	Leu Lys Asp Ala	
	545	550	555	560
cag cat tat ggg	ggc tgg gag cac	cgg gat gtg cat	aac atc tat ggc	1728
Gln His Tyr Gly	Gly Trp Glu His	Arg Asp Val His	Asn Ile Tyr Gly	

565										570										575									
ctt	tat	gtg	cac	atg	gcg	act	gct	gat	ggg	ctg	aga	cag	cgc	tct	ggg														
Leu	Tyr	Val	His	Met	Ala	Thr	Ala	Asp	Gly	Leu	Arg	Gln	Arg	Ser	Gly														
			580						585						590														1776
ggc	atg	gaa	cgc	ccc	ttt	gtc	ctg	gcc	agg	gcc	ttc	ttc	gct	ggc	tcc														
Gly	Met	Glu	Arg	Pro	Phe	Val	Leu	Ala	Arg	Ala	Phe	Phe	Ala	Gly	Ser														
			595						600						605														1824
cag	cgc	ttt	gga	gcc	gtg	tgg	aca	ggg	gac	aac	act	gcc	gag	tgg	gac														
Gln	Arg	Phe	Gly	Ala	Val	Trp	Thr	Gly	Asp	Asn	Thr	Ala	Glu	Trp	Asp														
			610						615						620														1872
cat	ttg	aag	atc	tct	att	cct	atg	tgt	ctc	agc	ttg	ggg	ctg	gtg	gga														
His	Leu	Lys	Ile	Ser	Ile	Pro	Met	Cys	Leu	Ser	Leu	Gly	Leu	Val	Gly														
						630									640														1920
ctt	tcc	ttc	tgt	ggg	gcg	gat	gtg	ggg	ggc	ttc	ttc	aaa	aac	cca	gag														
Leu	Ser	Phe	Cys	Gly	Ala	Asp	Val	Gly	Gly	Phe	Phe	Lys	Asn	Pro	Glu														
						645									655														1968
cca	gag	ctg	ctt	gtg	cgc	tgg	tac	cag	atg	ggg	gct	tac	cag	cca	ttc														
Pro	Glu	Leu	Leu	Val	Arg	Trp	Tyr	Gln	Met	Gly	Ala	Tyr	Gln	Pro	Phe														
						660									670														2016
ttc	cgg	gca	cat	gcc	cac	ttg	gac	act	ggg	cga	cga	gag	cca	tgg	ctg														
Phe	Arg	Ala	His	Ala	His	Leu	Asp	Thr	Gly	Arg	Arg	Glu	Pro	Trp	Leu														
						675									685														2064
tta	cca	tct	cag	cac	aat	gat	ata	atc	cga	gat	gcc	ttg	ggc	cag	cga														
Leu	Pro	Ser	Gln	His	Asn	Asp	Ile	Ile	Arg	Asp	Ala	Leu	Gly	Gln	Arg														
						690									700														2112
tat	tct	ttg	ctg	ccc	ttc	tgg	tac	acc	ctc	tta	tat	cag	gcc	cat	cgg														
Tyr	Ser	Leu	Leu	Pro	Phe	Trp	Tyr	Thr	Leu	Leu	Tyr	Gln	Ala	His	Arg														
						710									720														2160
gaa	ggc	att	cct	gtc	atg	agg	ccc	ctg	tgg	gtg	cag	tac	cct	cag	gat														
Glu	Gly	Ile	Pro	Val	Met	Arg	Pro	Leu	Trp	Val	Gln	Tyr	Pro	Gln	Asp														
						725									735														2208
gtg	act	acc	ttc	aat	ata	gat	gat	cag	tac	ttg	ctt	ggg	gat	gcg	ttg														
Val	Thr	Thr	Phe	Asn	Ile	Asp	Asp	Gln	Tyr	Leu	Leu	Gly	Asp	Ala	Leu														
						740									750														2256
ctg	gtt	cac	cct	gta	tca	gac	tct	gga	gcc	cat	ggg	gtc	cag	gtc	tat														
Leu	Val	His	Pro	Val	Ser	Asp	Ser	Gly	Ala	His	Gly	Val	Gln	Val	Tyr														
						755									765														2304
ctg	cct	ggc	caa	ggg	gag	gtg	tgg	tat	gac	att	caa	agc	tac	cag	aag														
Leu	Pro	Gly	Gln	Gly	Glu	Val	Trp	Tyr	Asp	Ile	Gln	Ser	Tyr	Gln	Lys														
						770									780														2352
cat	cat	ggg	ccc	cag	acc	ctg	tac	ctg	cct	gta	act	cta	agc	agt	atc														
His	His	Gly	Pro	Gln	Thr	Leu	Tyr	Leu	Pro	Val	Thr	Leu	Ser	Ser	Ile														
						790									800														2400
cct	gtg	ttc	cag	cgt	gga	ggg	aca	atc	gtg	cct	cga	tgg	atg	cga	gtg														
Pro	Val	Phe	Gln	Arg	Gly	Gly	Thr	Ile	Val	Pro	Arg	Trp	Met	Arg	Val														
						805									815														2448
cgg	cgg	tct	tca	gaa	tgt	atg	aag	gat	gac	ccc	atc	act	ctc	ttt	gtt														
Arg	Arg	Ser	Ser	Glu	Cys	Met	Lys	Asp	Asp	Pro	Ile	Thr	Leu	Phe	Val														
																													2496

820	825	830	
gca ctt agc cct cag ggt aca gct caa gga gag ctc ttt ctg gat gat			2544
Ala Leu Ser Pro Gln Gly Thr Ala Gln Gly Glu Leu Phe Leu Asp Asp			
835	840	845	
ggg cac acg ttc aac tat cag act cgc caa gag ttc ctg ctg cgt cga			2592
Gly His Thr Phe Asn Tyr Gln Thr Arg Gln Glu Phe Leu Leu Arg Arg			
850	855	860	
ttc tca ttc tct ggc aac acc ctt gtc tcc agc tca gca gac cct gaa			2640
Phe Ser Phe Ser Gly Asn Thr Leu Val Ser Ser Ser Ala Asp Pro Glu			
865	870	875	880
gga cac ttt gag aca cca atc tgg att gag cgg gtg gtg ata ata ggg			2688
Gly His Phe Glu Thr Pro Ile Trp Ile Glu Arg Val Val Ile Ile Gly			
885	890	895	
gct gga aag cca gca gct gtg gta ctc cag aca aaa gga tct cca gaa			2736
Ala Gly Lys Pro Ala Ala Val Val Leu Gln Thr Lys Gly Ser Pro Glu			
900	905	910	
agc cgc ctg tcc ttc cag cat gac cct gag acc tct gtg ttg gtc ctg			2784
Ser Arg Leu Ser Phe Gln His Asp Pro Glu Thr Ser Val Leu Val Leu			
915	920	925	
cgc aag cct ggc atc aat gtg gca tct gat tgg agt att cac ctg cga			2832
Arg Lys Pro Gly Ile Asn Val Ala Ser Asp Trp Ser Ile His Leu Arg			
930	935	940	
taaccaagg gatgttctgg gttaggggga gggaagggga gcattagtgc tgagagatat			2892
tctttctctct gccttggagt tcggccctcc ccagacttca cttatgctag tctaagaccc			2952
agattctgcc aacatttggg caggatgaga gggctgaccc tgggctccaa attcctcttg			3012
tgatctctct accctctcca ctccattgat accaactctt tcccttcatt cccccaacat			3072
cctgttgctc taactggagc acattcactt acgaacacca ggaaaccaca gggcccttgt			3132
cgcccttctt ctttccctta tttaggagcc ctgaactccc ccagagtcta tccattcatg			3192
cctcttgtat gttgatgcca cttcttgga gaagatgagg gcaatgagtt agggctcctt			3252
ttccccctcc ctcccaccag attgctctcc cacctttcat ttcttctccc aggctttact			3312
ccccttttta tgccccaccg ataacctggg accacccctt accccggaca ggatgaatgg			3372
atcaaaggag tgaggttgct aaagaacatc cttttccctc tcattctacc cttttctctt			3432
ccccgattcc ttgtagagct gctgcaatc ttagaggggc agttctacct cctctgtccc			3492
tcggcagaaa gacgtttcca cacctcttag gggatgcgca ttaaacttct tttgccccct			3552
tcttgctccc tttgaggggc acttaagatg gagaaatcag ttgtggtttc agtgaatcat			3612
ggtcacctgt atttattgct aggagaagcc tgaggggtggg gggagatgat catgtgtgct			3672
cggggttgcc tggaagccct ggggtggggg tttggggagg actaatgggg agtcggggaa			3732
tatttggtggg tatttttttt tacttctctt tggttccag ctgtgacacg ttttgatcaa			3792
aggagaaaca ataaagggat aaaccataaa taaaaaaaaa aaaa			3836

<210> 897
 <211> 2276
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (99)..(2273)

<400> 897
 ggtggggatc tcgacgttga acgcctgcgg taccgggtccg gaattcccgg gtcgaccac 60
 gcgtccgcc acgcgtccgc ccacgcgtcc gcctggac atg aag acc gag ggg 113
 Met Lys Thr Glu Gly
 1 5
 ggt aaa gtt ctt tac aaa gtt cgc tgg aaa ggc tat aca tcg gat gat 161
 Gly Lys Val Leu Tyr Lys Val Arg Trp Lys Gly Tyr Thr Ser Asp Asp
 10 15 20
 gat acc tgg gag ccc gag att cac ctg gag gac tgt aaa gaa gtg ctt 209
 Asp Thr Trp Glu Pro Glu Ile His Leu Glu Asp Cys Lys Glu Val Leu
 25 30 35
 ctt gaa ttt agg aag aga att gca gag aac ata gcc aaa gca gtc aag 257
 Leu Glu Phe Arg Lys Arg Ile Ala Glu Asn Ile Ala Lys Ala Val Lys
 40 45 50
 aag gat att cag aga cta tcc tta aat aac gac ata ttt gag gcg aac 305
 Lys Asp Ile Gln Arg Leu Ser Leu Asn Asn Asp Ile Phe Glu Ala Asn
 55 60 65
 tct gat agc gat cag caa agt gag aca aaa gaa gat act tcc cca aag 353
 Ser Asp Ser Asp Gln Gln Ser Glu Thr Lys Glu Asp Thr Ser Pro Lys
 70 75 80 85
 aag aaa aag aaa aaa ttg agg cag aga gaa gag aaa agc cca gat gat 401
 Lys Lys Lys Lys Lys Leu Arg Gln Arg Glu Glu Lys Ser Pro Asp Asp
 90 95 100
 ctg aaa aag aaa aaa gca aag gcc ggg aag cta aaa gac aag tcc aaa 449
 Leu Lys Lys Lys Lys Ala Lys Ala Gly Lys Leu Lys Asp Lys Ser Lys
 105 110 115
 cca gac ctg gag agc tcc ttg gaa agt tta gtt ttt gat tta agg aca 497
 Pro Asp Leu Glu Ser Ser Leu Glu Ser Leu Val Phe Asp Leu Arg Thr
 120 125 130
 aag aaa aga att tct gaa gcc aaa gaa gaa cta aag gag tcc aaa aag 545
 Lys Lys Arg Ile Ser Glu Ala Lys Glu Glu Leu Lys Glu Ser Lys Lys
 135 140 145
 ccc aaa aaa gat gaa gta aaa gaa aca aaa gaa tta aag aaa gtt aaa 593
 Pro Lys Lys Asp Glu Val Lys Glu Thr Lys Glu Leu Lys Lys Val Lys
 150 155 160 165
 aag ggt gaa ata aga gat tta aag acg aaa aca aga gaa gat ccc aaa 641
 Lys Gly Glu Ile Arg Asp Leu Lys Thr Lys Thr Arg Glu Asp Pro Lys
 170 175 180
 gaa aat aga aaa aca aaa aaa gaa aaa ttt gtc gaa tcc cag gtg gaa 689

Glu Asn Arg	Lys Thr Lys Lys	Glu Lys Phe Val	Glu Ser Gln Val Glu	
	185	190	195	
tct gaa tca agt gta ctt aat gat tct ccc ttt cca gag gat gac agt				737
Ser Glu Ser Ser Val Leu Asn Asp Ser Pro Phe Pro Glu Asp Asp Ser	200	205	210	
gaa ggg cta cat tcc gac agc aga gaa gag aaa caa aac act aaa agt				785
Glu Gly Leu His Ser Asp Ser Arg Glu Glu Lys Gln Asn Thr Lys Ser	215	220	225	
gca aga gag aga gca ggg cag gac atg ggg ctg gag cat ggc ttt gag				833
Ala Arg Glu Arg Ala Gly Gln Asp Met Gly Leu Glu His Gly Phe Glu	230	235	240 245	
aag ccc cta gac agt gcc atg agt gct gag gag gat acc gat gtc aga				881
Lys Pro Leu Asp Ser Ala Met Ser Ala Glu Glu Asp Thr Asp Val Arg	250	255	260	
ggc agg agg aaa aag aag acc ccg aga aag gct gag gac act aga gag				929
Gly Arg Arg Lys Lys Lys Thr Pro Arg Lys Ala Glu Asp Thr Arg Glu	265	270	275	
aac agg aag cta gag aac aag aac gct ttc tta gag aag aaa act gtg				977
Asn Arg Lys Leu Glu Asn Lys Asn Ala Phe Leu Glu Lys Lys Thr Val	280	285	290	
cct aaa aag cag agg aat caa gac aga agc aaa agt gct gca gag tta				1025
Pro Lys Lys Gln Arg Asn Gln Asp Arg Ser Lys Ser Ala Ala Glu Leu	295	300	305	
gag aag ctg atg cct gta tct gcc caa acg cca aag ggc cgg agg ttg				1073
Glu Lys Leu Met Pro Val Ser Ala Gln Thr Pro Lys Gly Arg Arg Leu	310	315	320 325	
agc ggg gaa gag aga ggc ctc tgg tcc acg gac tca gcc gag gag gac				1121
Ser Gly Glu Glu Arg Gly Leu Trp Ser Thr Asp Ser Ala Glu Glu Asp	330	335	340	
aaa gaa acc aaa aga aat gaa tcc aaa gaa aaa tat cag aaa agg cat				1169
Lys Glu Thr Lys Arg Asn Glu Ser Lys Glu Lys Tyr Gln Lys Arg His	345	350	355	
gat tct gac aag gaa gaa aaa ggc aga aaa gag cca aaa gga tta aag				1217
Asp Ser Asp Lys Glu Glu Lys Gly Arg Lys Glu Pro Lys Gly Leu Lys	360	365	370	
aaa gcc att ttg gta caa gct tca aca tcc agc tat aga cag tct ggt				1265
Lys Ala Ile Leu Val Gln Ala Ser Thr Ser Ser Tyr Arg Gln Ser Gly	375	380	385	
gtc ttt agc tgt ggg aaa ggt gct ggt gtg act tgg atc act ctg aga				1313
Val Phe Ser Cys Gly Lys Gly Ala Gly Val Thr Trp Ile Thr Leu Arg	390	395	400 405	
ctc act gcc ttc agt agg cct ttg tca caa ctg cag gaa atc aga aat				1361
Leu Thr Ala Phe Ser Arg Pro Leu Ser Gln Leu Gln Glu Ile Arg Asn	410	415	420	
gca ttt gat tta ttt aaa tta act cca gaa gaa aaa aat gat gtt tct				1409
Ala Phe Asp Leu Phe Lys Leu Thr Pro Glu Glu Lys Asn Asp Val Ser	425	430	435	
gag aat aat cgg aaa agg gaa gaa ata cca ctg gat ttt aaa acc ata				1457

Glu Asn Asn Arg Lys Arg Glu Glu Ile Pro Leu Asp Phe Lys Thr Ile	
440 445 450	
gac gat cac aaa acc aag gaa aac aaa cag tca ctt aaa gaa agg aga	1505
Asp Asp His Lys Thr Lys Glu Asn Lys Gln Ser Leu Lys Glu Arg Arg	
455 460 465	
aac acc aga gac gaa acg gat act tgg gca tac att gct gca gaa ggt	1553
Asn Thr Arg Asp Glu Thr Asp Thr Trp Ala Tyr Ile Ala Ala Glu Gly	
470 475 480 485	
gat cag gag gtt tta gac agc gtg tgc caa gca gat gag aat tca ggg	1601
Asp Gln Glu Val Leu Asp Ser Val Cys Gln Ala Asp Glu Asn Ser Gly	
490 495 500	
gcc aac aga cgc ctc ata cag gag agc tcc ggc tgg cat ctg gcg ggt	1649
Ala Asn Arg Arg Leu Ile Gln Glu Ser Ser Gly Trp His Leu Ala Gly	
505 510 515	
gcc cct ctg gga cga agc ttc cag agg aag gaa cag gca gca atc ttt	1697
Ala Pro Leu Gly Arg Ser Phe Gln Arg Lys Glu Gln Ala Ala Ile Phe	
520 525 530	
gct gtt ctg cag ctt ccg ctg gtg ata ccc agg caa acà gag tct gga	1745
Ala Val Leu Gln Leu Pro Leu Val Ile Pro Arg Gln Thr Glu Ser Gly	
535 540 545	
gat cac aac tcc tcg cca agg gaa caa aac tgg gcg gag aat gag ttt	1793
Asp His Asn Ser Ser Pro Arg Glu Gln Asn Trp Ala Glu Asn Glu Phe	
550 555 560 565	
gac gaa ttg aca gaa gta ggc ttc aga agg tgg gta ata aac tcc tct	1841
Asp Glu Leu Thr Glu Val Gly Phe Arg Arg Trp Val Ile Asn Ser Ser	
570 575 580	
gag cta aaa gag cat gtt cta acc caa tgc aag gaa gct aag aac ctt	1889
Glu Leu Lys Glu His Val Leu Thr Gln Cys Lys Glu Ala Lys Asn Leu	
585 590 595	
gag aaa agg tta gag gaa ttg ctg act aga ata aca agt tta ggg aag	1937
Glu Lys Arg Leu Glu Glu Leu Thr Arg Ile Thr Ser Leu Gly Lys	
600 605 610	
aac aga aat gac ctg atg gag ctg aaa aca cag cac gag aac ttc atg	1985
Asn Arg Asn Asp Leu Met Glu Leu Lys Thr Gln His Glu Asn Phe Met	
615 620 625	
aag cat aca caa gta tca ata acg aaa tcg gaa cgc agc tcc tca cca	2033
Lys His Thr Gln Val Ser Ile Thr Lys Ser Glu Arg Ser Ser Ser Pro	
630 635 640 645	
gca acg gaa caa agc tgg atg gag aat gac ttt gac aag ttg aga gaa	2081
Ala Thr Glu Gln Ser Trp Met Glu Asn Asp Phe Asp Lys Leu Arg Glu	
650 655 660	
ggc ttc aga cga tca aac tac tcc gag cta aag gag gaa gtt caa acc	2129
Gly Phe Arg Arg Ser Asn Tyr Ser Glu Leu Lys Glu Glu Val Gln Thr	
665 670 675	
cat agc aaa gaa gtt aaa aac ctt gaa aaa aga tta gac gaa tgg cta	2177
His Ser Lys Glu Val Lys Asn Leu Glu Lys Arg Leu Asp Glu Trp Leu	
680 685 690	
act aga ata acc aat gca gag aag tcc tta aag gac ctg atg gag ctg	2225

Thr Arg Ile Thr Asn Ala Glu Lys Ser Leu Lys Asp Leu Met Glu Leu
 695 700 705
 aaa acc aag gca cga gaa cta cgt gac gaa cgc aca agc ctc agt agc 2273
 Lys Thr Lys Ala Arg Glu Leu Arg Asp Glu Arg Thr Ser Leu Ser Ser
 710 715 720 725
 tga 2276

 <210> 898
 <211> 3672
 <212> DNA
 <213> Homo sapiens

 <220>
 <221> CDS
 <222> (731)..(3451)

 <400> 898
 ctgatgctgg aattgatcat ggagatctcg tttctgttcc tgggcccgga tcatatccat 60
 gaccttccgg ttttcaggga ggcaggtggg gcagtcagca tcactttccg agtaactctc 120
 aaagcagtgt tgggtgaagg agtggccaca caggaagtgg actgagggca actccaaggc 180
 actgttacag atgctgcact tggctctttg gaaaacttta ggatcccaa cccccgccg 240
 ctcttttccc cgtttctcca gcagagggcg caggcccaaa ggttcgcgcg accccgcccc 300
 agcctggccc cgccccgccc cggcgtaggg gcggggaaga cgggcacaga aacctggccg 360
 cggctttccg ggagctgtgg gcacgcgagc tgctcgaagc cggtgggccg gggatcgtcg 420
 ctgcccagtc cggcccgggc cggccgcttc cccgagctta ccagtaagcc ggtccgcctc 480
 cgggacgcgc cccgcccgcc ccgggctcgc gcgctctgaa ggggcgcgct ccgcgcactc 540
 ccggcgccgc ccaactccct ccccacggcc gctcctccct ccgcccggat agccggcggc 600
 ggcggcgggc gcggcgggcg cggcgggggc ggcggcgggg agaggccct ccttcacgcc 660
 ctgcttctct ccctcgctcg cagtcgagcc gagccggcgg acccgccctg gtcgcgacct 720
 tgcccaggcc atg gcc ggc aac gtg aag aag agc tct ggg gcc ggg ggc 769
 Met Ala Gly Asn Val Lys Lys Ser Ser Gly Ala Gly Gly
 1 5 10
 ggc agc ggc tcc ggg ggc tcg ggt tcg ggt ggc ctg att ggg ctc atg 817
 Gly Ser Gly Ser Gly Gly Ser Gly Ser Gly Gly Leu Ile Gly Leu Met
 15 20 25
 aag gac gcc ttc cag ccg cac cac cac cac cac cac ctc agc ccc 865
 Lys Asp Ala Phe Gln Pro His His His His His His His Leu Ser Pro
 30 35 40 45
 cac ccg ccg ggg acg gtg gac aag aag atg gtg gag aag tgc tgg aag 913
 His Pro Pro Gly Thr Val Asp Lys Lys Met Val Glu Lys Cys Trp Lys
 50 55 60
 ctc atg gac aag gtg gtg cgg ttg tgt cag aac cca aag ctg gcg cta 961
 Leu Met Asp Lys Val Val Arg Leu Cys Gln Asn Pro Lys Leu Ala Leu

65	70	75	
aag aat agc cca cct tat atc tta gac ctg cta cca gat acc tac cag			1009
Lys Asn Ser Pro Pro Tyr Ile Leu Asp Leu Leu Pro Asp Thr Tyr Gln			
80	85	90	
cat ctc cgt act atc ttg tca aga tat gag ggg aag atg gag aca ctt			1057
His Leu Arg Thr Ile Leu Ser Arg Tyr Glu Gly Lys Met Glu Thr Leu			
95	100	105	
gga gaa aat gag tat ttt agg gtg ttt atg gag aat ttg atg aag aaa			1105
Gly Glu Asn Glu Tyr Phe Arg Val Phe Met Glu Asn Leu Met Lys Lys			
110	115	120	125
act aag caa acc ata agc ctc ttc aag gag gga aaa gaa aga atg tat			1153
Thr Lys Gln Thr Ile Ser Leu Phe Lys Glu Gly Lys Glu Arg Met Tyr			
130	135	140	
gag gag aat tct cag cct agg cga aac cta acc aaa ctg tcc ctc atc			1201
Glu Glu Asn Ser Gln Pro Arg Arg Asn Leu Thr Lys Leu Ser Leu Ile			
145	150	155	
ttc agc cac atg ctg gca gaa cta aaa gga atc ttt cca agt gga ctc			1249
Phe Ser His Met Leu Ala Glu Leu Lys Gly Ile Phe Pro Ser Gly Leu			
160	165	170	
ttt cag gga gac aca ttt cgg att act aaa gca gat gct gcg gaa ttt			1297
Phe Gln Gly Asp Thr Phe Arg Ile Thr Lys Ala Asp Ala Ala Glu Phe			
175	180	185	
tgg aga aaa gct ttt ggg gaa aag aca ata gtc cct tgg aag agc ttt			1345
Trp Arg Lys Ala Phe Gly Glu Lys Thr Ile Val Pro Trp Lys Ser Phe			
190	195	200	205
cga cag gct cta cat gaa gtg cat ccc atc agt tct ggg ctg gag gcc			1393
Arg Gln Ala Leu His Glu Val His Pro Ile Ser Ser Gly Leu Glu Ala			
210	215	220	
atg gct ctg aaa tcc act att gat ctg acc tgc aat gat tat att tgc			1441
Met Ala Leu Lys Ser Thr Ile Asp Leu Thr Cys Asn Asp Tyr Ile Ser			
225	230	235	
gtt ttt gaa ttt gac atc ttt acc cga ctc ttt cag ccc tgg tcc tct			1489
Val Phe Glu Phe Asp Ile Phe Thr Arg Leu Phe Gln Pro Trp Ser Ser			
240	245	250	
ttg ctc agg aat tgg aac agc ctt gct gta act cat cct ggc tac atg			1537
Leu Leu Arg Asn Trp Asn Ser Leu Ala Val Thr His Pro Gly Tyr Met			
255	260	265	
gct ttt ttg acg tat gac gaa gtg aaa gct cgg ctc cag aaa ttc att			1585
Ala Phe Leu Thr Tyr Asp Glu Val Lys Ala Arg Leu Gln Lys Phe Ile			
270	275	280	285
cac aaa cct ggc agt tat atc ttc cgg ctg agc tgt act cgt ctg ggt			1633
His Lys Pro Gly Ser Tyr Ile Phe Arg Leu Ser Cys Thr Arg Leu Gly			
290	295	300	
cag tgg gct att ggg tat gtt act gct gat ggg aac att ctc cag aca			1681
Gln Trp Ala Ile Gly Tyr Val Thr Ala Asp Gly Asn Ile Leu Gln Thr			
305	310	315	
atc cct cac aat aaa cct ctc ttc caa gca ctg att gat ggc ttc agg			1729
Ile Pro His Asn Lys Pro Leu Phe Gln Ala Leu Ile Asp Gly Phe Arg			

320	325	330	
gaa ggc ttc tat ttg ttt cct gat gga cga aat cag aat cct gat ctg Glu Gly Phe Tyr Leu Phe Pro Asp Gly Arg Asn Gln Asn Pro Asp Leu 335 340 345			1777
act ggc tta tgt gaa cca act ccc caa gac cat atc aaa gtg acc cag Thr Gly Leu Cys Glu Pro Thr Pro Gln Asp His Ile Lys Val Thr Gln 350 355 360 365			1825
gaa caa tat gaa tta tac tgt gag atg ggc tcc aca ttc caa cta tgt Glu Gln Tyr Glu Leu Tyr Cys Glu Met Gly Ser Thr Phe Gln Leu Cys 370 375 380			1873
aaa ata tgt gct gaa aat gat aag gat gta aag att gag ccc tgt gga Lys Ile Cys Ala Glu Asn Asp Lys Asp Val Lys Ile Glu Pro Cys Gly 385 390 395			1921
cac ctc atg tgc aca tcc tgt ctt aca tcc tgg cag gaa tca gaa ggt His Leu Met Cys Thr Ser Cys Leu Thr Ser Trp Gln Glu Ser Glu Gly 400 405 410			1969
cag ggc tgt cct ttc tgc cga tgt gaa att aaa ggt act gaa ccc atc Gln Gly Cys Pro Phe Cys Arg Cys Glu Ile Lys Gly Thr Glu Pro Ile 415 420 425			2017
gtg gta gat ccg ttt gat cct aga ggg agt ggc agc ctg ttg agg caa Val Val Asp Pro Phe Asp Pro Arg Gly Ser Gly Ser Leu Leu Arg Gln 430 435 440 445			2065
gga gca gag gga gct ccc tcc cca aat tat gat gat gat gat gat gaa Gly Ala Glu Gly Ala Pro Ser Pro Asn Tyr Asp Asp Asp Asp Asp Glu 450 455 460			2113
cga gct gat gat act ctc ttc atg atg aag gaa ttg gct ggt gcc aag Arg Ala Asp Asp Thr Leu Phe Met Met Lys Glu Leu Ala Gly Ala Lys 465 470 475			2161
gtg gaa cgg ccg cct tct cca ttc tcc atg gcc cca caa gct tcc ctt Val Glu Arg Pro Pro Ser Pro Phe Ser Met Ala Pro Gln Ala Ser Leu 480 485 490			2209
ccc ccg gtg cca cca cga ctt gac ctt ctg ccg cag cga gta tgt gtt Pro Pro Val Pro Pro Arg Leu Asp Leu Leu Pro Gln Arg Val Cys Val 495 500 505			2257
ccc tca agt gct tct gct ctt gga act gct tct aag gct gct tct ggc Pro Ser Ser Ala Ser Ala Leu Gly Thr Ala Ser Lys Ala Ala Ser Gly 510 515 520 525			2305
tcc ctt cat aaa gac aaa cca ttg cca gta cct ccc aca ctt cga gat Ser Leu His Lys Asp Lys Pro Leu Pro Val Pro Pro Thr Leu Arg Asp 530 535 540			2353
ctt cca cca cca ccg cct cca gac cgg cca tat tct gtt gga gca gaa Leu Pro Pro Pro Pro Pro Pro Asp Arg Pro Tyr Ser Val Gly Ala Glu 545 550 555			2401
tcc cga cct caa aga cgc ccc ttg cct tgt aca cca ggc gac tgt ccc Ser Arg Pro Gln Arg Arg Pro Leu Pro Cys Thr Pro Gly Asp Cys Pro 560 565 570			2449
tcc aga gac aaa ctg ccc cct gtc ccc tct agc cgc ctt gga gac tca Ser Arg Asp Lys Leu Pro Pro Val Pro Ser Ser Arg Leu Gly Asp Ser			2497

575	580	585	
tgg ctg ccc cgg cca atc ccc aaa gta cca gta tct gcc cca agt tcc			2545
Trp Leu Pro Arg Pro Ile Pro Lys Val Pro Val Ser Ala Pro Ser Ser			
590	595	600	605
agt gat ccc tgg aca gga aga gaa tta acc aac cgg cac tca ctt cca			2593
Ser Asp Pro Trp Thr Gly Arg Glu Leu Thr Asn Arg His Ser Leu Pro			
610	615		620
ttt tca ttg ccc tca caa atg gag ccc aga cca gat gtg cct agg ctc			2641
Phe Ser Leu Pro Ser Gln Met Glu Pro Arg Pro Asp Val Pro Arg Leu			
625	630		635
gga agc acg ttc agt ctg gat acc tcc atg agt atg aat agc agc cca			2689
Gly Ser Thr Phe Ser Leu Asp Thr Ser Met Ser Met Asn Ser Ser Pro			
640	645		650
tta gta ggt cca gag tgt gac cac ccc aaa atc aaa cct tcc tca tct			2737
Leu Val Gly Pro Glu Cys Asp His Pro Lys Ile Lys Pro Ser Ser Ser			
655	660		665
gcc aat gcc att tat tct ctg gct gcc aga cct ctt cct gtg cca aaa			2785
Ala Asn Ala Ile Tyr Ser Leu Ala Ala Arg Pro Leu Pro Val Pro Lys			
670	675	680	685
ctg cca cct ggg gag caa tgt gag ggt gaa gag gac aca gag tac atg			2833
Leu Pro Pro Gly Glu Gln Cys Glu Gly Glu Glu Asp Thr Glu Tyr Met			
690		695	700
act ccc tct tcc agg cct cta cgg cct ttg gat aca tcc cag agt tca			2881
Thr Pro Ser Ser Arg Pro Leu Arg Pro Leu Asp Thr Ser Gln Ser Ser			
705	710		715
cga gca tgt gat tgc gac cag cag att gat agc tgt acg tat gaa gca			2929
Arg Ala Cys Asp Cys Asp Gln Gln Ile Asp Ser Cys Thr Tyr Glu Ala			
720	725		730
atg tat aat att cag tcc cag gcg cca tct atc acc gag agc agc acc			2977
Met Tyr Asn Ile Gln Ser Gln Ala Pro Ser Ile Thr Glu Ser Ser Thr			
735	740	745	
ttt ggt gaa ggg aat ttg gcc gca gcc cat gcc aac act ggt ccc gag			3025
Phe Gly Glu Gly Asn Leu Ala Ala Ala His Ala Asn Thr Gly Pro Glu			
750	755	760	765
gag tca gaa aat gag gat gat ggg tat gat gtc cca aag cca cct gtg			3073
Glu Ser Glu Asn Glu Asp Asp Gly Tyr Asp Val Pro Lys Pro Pro Val			
770	775		780
ccg gcc gtg ctg gcc cgc cga act ctc tca gat atc tct aat gcc agc			3121
Pro Ala Val Leu Ala Arg Arg Thr Leu Ser Asp Ile Ser Asn Ala Ser			
785	790		795
tcc tcc ttt ggc tgg ttg tct ctg gat ggt gat cct aca aca aat gtc			3169
Ser Ser Phe Gly Trp Leu Ser Leu Asp Gly Asp Pro Thr Thr Asn Val			
800	805		810
act gaa ggt tcc caa gtt ccc gag agg cct cca aaa cca ttc ccg cgg			3217
Thr Glu Gly Ser Gln Val Pro Glu Arg Pro Pro Lys Pro Phe Pro Arg			
815	820	825	
aga atc aac tct gaa cgg aaa gct ggc agc tgt cag caa ggt agt ggt			3265
Arg Ile Asn Ser Glu Arg Lys Ala Gly Ser Cys Gln Gln Gly Ser Gly			

830	835	840	845	
cct gcc gcc tct gct gcc acc gcc tca cct cag ctc tcc agt gag atc				3313
Pro Ala Ala Ser Ala Ala Thr Ala Ser Pro Gln Leu Ser Ser Glu Ile	850	855	860	
gag aac ctc atg agt cag ggg tac tcc tac cag gac atc cag aaa gct				3361
Glu Asn Leu Met Ser Gln Gly Tyr Ser Tyr Gln Asp Ile Gln Lys Ala	865	870	875	
ttg gtc att gcc cag aac aac atc gag atg gcc aaa aac atc ctc cgg				3409
Leu Val Ile Ala Gln Asn Asn Ile Glu Met Ala Lys Asn Ile Leu Arg	880	885	890	
gaa ttt gtt tcc att tct tct cct gcc cat gta gct acc tag cacacca				3458
Glu Phe Val Ser Ile Ser Ser Pro Ala His Val Ala Thr *	895	900	905	
tctccctgct gcaggtttag aggaccagtg agttgggagt tattactcaa gtggcaccta				3518
gaagggcagg agttcctttg gtgacttcac agtgaagtct tgccctctct gtgggatatc				3578
acatcagtgg ttccaagatt tcaaagtggg gaaatgaaaa tggagcagct agtatgtttt				3638
attattttat gggctcttgag tgcatttgaa ggtg				3672

<210> 899
 <211> 2865
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (78)..(2699)

<400> 899	
attgaacact ttgaacgcct gcggtaccgg accggaattc ccgggtcgac ccacgcgtcc	60
gcggacgcgt ggggagc atg gac ggt gcc atg ggg cct cgg ggg ctg ctg	110
Met Asp Gly Ala Met Gly Pro Arg Gly Leu Leu	
1 5 10	
atg tgc atg tac ctg gta tct ctc ctc atc ctg cag gcc atg cct gcc	158
Met Cys Met Tyr Leu Val Ser Leu Leu Ile Leu Gln Ala Met Pro Ala	
15 20 25	
ctg ggc tcg gct aca ggc agg tcc aag agc agc gag aag cga cag gct	206
Leu Gly Ser Ala Thr Gly Arg Ser Lys Ser Ser Glu Lys Arg Gln Ala	
30 35 40	
gtg gac acc gct gtc gat ggc gtg ttc atc cgg agt ttg aaa gtc aac	254
Val Asp Thr Ala Val Asp Gly Val Phe Ile Arg Ser Leu Lys Val Asn	
45 50 55	
tgc aaa gtc acc tct cgc ttc gcc cac tat gtt gtc acc agc caa gtg	302
Cys Lys Val Thr Ser Arg Phe Ala His Tyr Val Val Thr Ser Gln Val	
60 65 70 75	
gtc aac act gcc aat gaa gcc agg gaa gtg gcc ttc gac ctg gaa atc	350
Val Asn Thr Ala Asn Glu Ala Arg Glu Val Ala Phe Asp Leu Glu Ile	
80 85 90	

ccc aac aca ggc ttc atc agt gac ttt gcc gtt aca gca gat gga aac	398
Pro Asn Thr Gly Phe Ile Ser Asp Phe Ala Val Thr Ala Asp Gly Asn	
95 100 105	
gca ttt atc gga gac ata aag gac aag gtg act gca tgg aag cag tac	446
Ala Phe Ile Gly Asp Ile Lys Asp Lys Val Thr Ala Trp Lys Gln Tyr	
110 115 120	
cgg aaa gca gct atc tca gga gag aat gcc ggc ctt gtc agg gcc tcg	494
Arg Lys Ala Ala Ile Ser Gly Glu Asn Ala Gly Leu Val Arg Ala Ser	
125 130 135	
ggg aga act atg gag caa ttc atc atc cac ctc acc gtc aat ccc cag	542
Gly Arg Thr Met Glu Gln Phe Ile Ile His Leu Thr Val Asn Pro Gln	
140 145 150 155	
agc aag gtc acg ttt cag ctg act tat gag gaa gtg ctg aag aga aac	590
Ser Lys Val Thr Phe Gln Leu Thr Tyr Glu Glu Val Leu Lys Arg Asn	
160 165 170	
cat atg cag tat gaa att gtc atc aaa gtc aag ccc aag cag ctg gtg	638
His Met Gln Tyr Glu Ile Val Ile Lys Val Lys Pro Lys Gln Leu Val	
175 180 185	
cat cat ttt gag att gat gtg gac atc ttc gag ccc cag ggg atc agc	686
His His Phe Glu Ile Asp Val Asp Ile Phe Glu Pro Gln Gly Ile Ser	
190 195 200	
aag ctg gat gcc cag gcc tct ttc ctg ccg aag gaa ctg gca gcc caa	734
Lys Leu Asp Ala Gln Ala Ser Phe Leu Pro Lys Glu Leu Ala Ala Gln	
205 210 215	
act atc aag aag tcc ttc tca gga aaa aag ggt cat gtg ctg ttc cgt	782
Thr Ile Lys Lys Ser Phe Ser Gly Lys Lys Gly His Val Leu Phe Arg	
220 225 230 235	
ccc acc gtg agc cag cag cag tcc tgc ccc aca tgc tct aca tcc tta	830
Pro Thr Val Ser Gln Gln Gln Ser Cys Pro Thr Cys Ser Thr Ser Leu	
240 245 250	
ctg aac ggg cac ttc aag gtg acc tac gat gtc agt cga gac aag atc	878
Leu Asn Gly His Phe Lys Val Thr Tyr Asp Val Ser Arg Asp Lys Ile	
255 260 265	
tgc gac ctc ctg gtg gcc aat aac cac ttt gcc cac ttc ttt gcc ccc	926
Cys Asp Leu Val Ala Asn Asn His Phe Ala His Phe Phe Ala Pro	
270 275 280	
caa aac ctg aca aac atg aac aag aac gtg gtt ttt gtg att gac atc	974
Gln Asn Leu Thr Asn Met Asn Lys Asn Val Val Phe Val Ile Asp Ile	
285 290 295	
agt ggc tcc atg aga ggc cag aaa gtg aag cag acc aag gag gca ctc	1022
Ser Gly Ser Met Arg Gly Gln Lys Val Lys Gln Thr Lys Glu Ala Leu	
300 305 310 315	
ctt aaa att ctg ggg gac atc cac cca ggg gac tac ttt gac ctg gtt	1070
Leu Lys Ile Leu Gly Asp Ile His Pro Gly Asp Tyr Phe Asp Leu Val	
320 325 330	
ctt ttt ggg act cga gta caa tcg tgg aag ggc tcg ctg gtg caa gca	1118
Leu Phe Gly Thr Arg Val Gln Ser Trp Lys Gly Ser Leu Val Gln Ala	
335 340 345	

tct gag gcc aac cta caa gca gct caa gac ttt gtg cgg ggc ttt tcc Ser Glu Ala Asn Leu Gln Ala Ala Gln Asp Phe Val Arg Gly Phe Ser 350 355 360	1166
ctg gat gag gcc aca aac ctg aat gga ggt ttg ctc cgg gga att gag Leu Asp Glu Ala Thr Asn Leu Asn Gly Gly Leu Leu Arg Gly Ile Glu 365 370 375	1214
atc ttg aac caa gtt cag gaa agc ctc cca gaa ctc agc aac cat gcc Ile Leu Asn Gln Val Gln Glu Ser Leu Pro Glu Leu Ser Asn His Ala 380 385 390 395	1262
tca ata ctc atc atg ttg aca gat ggc gat ccc aca gag ggg gtg acg Ser Ile Leu Ile Met Leu Thr Asp Gly Asp Pro Thr Glu Gly Val Thr 400 405 410	1310
gac cgt tcc caa atc ctc aag aac gtc cgc aac gcc atc cgg ggc agg Asp Arg Ser Gln Ile Leu Lys Asn Val Arg Asn Ala Ile Arg Gly Arg 415 420 425	1358
ttc ccg ctc tac aac ctg ggt ttc ggc cac aat gtg gac ttt aac ttt Phe Pro Leu Tyr Asn Leu Gly Phe Gly His Asn Val Asp Phe Asn Phe 430 435 440	1406
ctg gag gtc atg tcc atg gag aac aac gga cgg gcc cag aga atc tac Leu Glu Val Met Ser Met Asn Asn Gly Arg Ala Gln Arg Ile Tyr 445 450 455	1454
gag gac cat gat gcc acc cag cag ctg cag ggt ttc tac agc cag gta Glu Asp His Asp Ala Thr Gln Gln Leu Gln Gly Phe Tyr Ser Gln Val 460 465 470 475	1502
gcc aaa ccc ctg ctg gtg gat gtg gat ttg cag tac ccc cag gat gct Ala Lys Pro Leu Leu Val Asp Val Asp Leu Gln Tyr Pro Gln Asp Ala 480 485 490	1550
gtc ttg gcc ctg acc cag aac cac cat aaa cag tac tac gaa ggc tca Val Leu Ala Leu Thr Gln Asn His His Lys Gln Tyr Tyr Glu Gly Ser 495 500 505	1598
gag att gtg gtg gcc ggg cgc att gct gac aac aaa cag agc agc ttc Glu Ile Val Val Ala Gly Arg Ile Ala Asp Asn Lys Gln Ser Ser Phe 510 515 520	1646
aag gct gat gtg cag gcc cat ggg gag gga caa gaa ttc agt ata acc Lys Ala Asp Val Gln Ala His Gly Glu Gly Gln Glu Phe Ser Ile Thr 525 530 535	1694
tgc cta gtg gat gag gag gag atg aag aaa ctg ctc cga gag cgt ggc Cys Leu Val Asp Glu Glu Glu Met Lys Lys Leu Leu Arg Glu Arg Gly 540 545 550 555	1742
cac atg ctg gag aac cac gtc gag cgc ctc tgg gcc tac ctc acc atc His Met Leu Glu Asn His Val Glu Arg Leu Trp Ala Tyr Leu Thr Ile 560 565 570	1790
cag gag ctg ctg gcc aag cgg atg aag gtg gac agg gag gtg agg gcc Gln Glu Leu Leu Ala Lys Arg Met Lys Val Asp Arg Glu Val Arg Ala 575 580 585	1838
aac ctg tca tcc cag gcc ctg cgg atg tcg ctg gac tat ggg ttt gtg Asn Leu Ser Ser Gln Ala Leu Arg Met Ser Leu Asp Tyr Gly Phe Val 590 595 600	1886

acc cca ctg acc tcc atg agc atc agg ggc atg gcg gac cag gac ggc Thr Pro Leu Thr Ser Met Ser Ile Arg Gly Met Ala Asp Gln Asp Gly 605 610 615	1934
ctg aag ccc acc atc gac aag ccc tca gag gat tct ccg cct ttg gag Leu Lys Pro Thr Ile Asp Lys Pro Ser Glu Asp Ser Pro Pro Leu Glu 620 625 630 635	1982
atg ctg gga ccc aga agg acg ttc gtg ctg tca gcc ttg cag cct tct Met Leu Gly Pro Arg Arg Thr Phe Val Leu Ser Ala Leu Gln Pro Ser 640 645 650	2030
cct act cat tcc agc tcc aat acc cag cgg ctg cca gac cga gtg acc Pro Thr His Ser Ser Ser Asn Thr Gln Arg Leu Pro Asp Arg Val Thr 655 660 665	2078
ggc ggc ttc tca gtg aat gga cag ctc att ggc aac aag gcc agg agc Gly Gly Phe Ser Val Asn Gly Gln Leu Ile Gly Asn Lys Ala Arg Ser 670 675 680	2126
cct ggg cag cat gac ggc acg tac ttc ggg cgg ctg gga atc gca aac Pro Gly Gln His Asp Gly Thr Tyr Phe Gly Arg Leu Gly Ile Ala Asn 685 690 695	2174
cct gcc acg gac ttt cag ttg gaa gtg act cct cag aac att acg ctg Pro Ala Thr Asp Phe Gln Leu Glu Val Thr Pro Gln Asn Ile Thr Leu 700 705 710 715	2222
aac ccc ggc ttt ggt ggg cct gtg ttt tcc tgg agg gac caa gct gtg Asn Pro Gly Phe Gly Gly Pro Val Phe Ser Trp Arg Asp Gln Ala Val 720 725 730	2270
ctg cgg cag gac ggg gtg gtg gtg acc atc aac aag aag agg aac ctg Leu Arg Gln Asp Gly Val Val Val Thr Ile Asn Lys Lys Arg Asn Leu 735 740 745	2318
gtg gtg tct gtg gac gac ggt ggc acc ttt gag gtt gtt ttg cac cga Val Val Ser Val Asp Asp Gly Gly Thr Phe Glu Val Val Leu His Arg 750 755 760	2366
gtg tgg aag ggg agc tcg gtc cac cag gac ttc ctg ggc ttc tat gtg Val Trp Lys Gly Ser Ser Val His Gln Asp Phe Leu Gly Phe Tyr Val 765 770 775	2414
ctg gac agt cat cgg atg tca gcc cgg acg cac ggg ctg ctg ggg caa Leu Asp Ser His Arg Met Ser Ala Arg Thr His Gly Leu Leu Gly Gln 780 785 790 795	2462
ttt ttc cac ccc atc ggt ttt gaa gtg tct gac atc cac cca ggc tct Phe Phe His Pro Ile Gly Phe Glu Val Ser Asp Ile His Pro Gly Ser 800 805 810	2510
gac ccc aca aag cca gat gcc acg atg gtg gtg agg aac cgc cgg ctc Asp Pro Thr Lys Pro Asp Ala Thr Met Val Val Arg Asn Arg Arg Leu 815 820 825	2558
acg gtc acc agg ggt ttg caa aaa gac tac agc aag gac ccg tgg cat Thr Val Thr Arg Gly Leu Gln Lys Asp Tyr Ser Lys Asp Pro Trp His 830 835 840	2606
ggg gcc gag gtg tcc tgc tgg ttc att cac aac aat ggg gct gga ctc Gly Ala Glu Val Ser Cys Trp Phe Ile His Asn Asn Gly Ala Gly Leu 845 850 855	2654

```

atc gat ggt gcc tac act gat tat atc gtc ccc gac atc ttc tga gcc      2702
Ile Asp Gly Ala Tyr Thr Asp Tyr Ile Val Pro Asp Ile Phe  *
860                               865                               870

ctctggccag cacgcctgtc ctccccggg gccaaaggcag aggaggagga cgacatcctg    2762

acctgctgct gaggtgttac ctccctgact aagctgggttc cttgtgtcaa agcacctcat    2822

gccttccatt aaagagaggc cgtgtccacc caaaaaaaaaaaa aaa                    2865

```

```

<210> 900
<211> 3336
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> CDS
<222> (132)..(1751)

```

```

<400> 900
atcgaccac gcgtccggga gcttgcgcca gtctcttcgc ggcgtccacc acttagacgc      60
aagttgctga agccggccgg ggagaagggtg ttgttgccgg agctgagacc gggcgccac    120
agtccgcagg g atg aac ctc gag ttg ctg gag tcc ttt ggg cag aac tat      170
      Met Asn Leu Glu Leu Leu Glu Ser Phe Gly Gln Asn Tyr
      1                               5                               10

cca gag gaa gct gat gga act ttg gat tgt atc agc atg gct ttg act      218
Pro Glu Glu Ala Asp Gly Thr Leu Asp Cys Ile Ser Met Ala Leu Thr
      15                               20                               25

tgc acc ttt aac agg tgg ggc aca ctg ctt gca gtt ggc tgt aat gat      266
Cys Thr Phe Asn Arg Trp Gly Thr Leu Leu Ala Val Gly Cys Asn Asp
      30                               35                               40                               45

ggc cga att gtc atc tgg gat ttc ttg aca aga ggc att gct aaa att      314
Gly Arg Ile Val Ile Trp Asp Phe Leu Thr Arg Gly Ile Ala Lys Ile
      50                               55                               60

aaa ttt agt gca cac atc cat cca gtg tgt tct tta tgc tgg agc cga      362
Lys Phe Ser Ala His Ile His Pro Val Cys Ser Leu Cys Trp Ser Arg
      65                               70                               75

gat ggt cat aaa ctc gtg agt gct tcc act gat aac ata gtg tca cag      410
Asp Gly His Lys Leu Val Ser Ala Ser Thr Asp Asn Ile Val Ser Gln
      80                               85                               90

tgg gat gtt ctt tca ggc gac tgt gac cag agg ttt cga ttc cct tca      458
Trp Asp Val Leu Ser Gly Asp Cys Asp Gln Arg Phe Arg Phe Pro Ser
      95                               100                               105

ccc atc tta aaa gtc caa tat cat cca cga gat cag aac aag gtt ctc      506
Pro Ile Leu Lys Val Gln Tyr His Pro Arg Asp Gln Asn Lys Val Leu
      110                               115                               120                               125

gtg tgt ccc atg aaa tct gct cct gtc atg ttg acc ctt tca gat tcc      554
Val Cys Pro Met Lys Ser Ala Pro Val Met Leu Thr Leu Ser Asp Ser
      130                               135                               140

```

aaa cat gtt gtt ctg ccg gtg gac gat gac tcc gat ttg aac gtt gtg	602
Lys His Val Val Leu Pro Val Asp Asp Asp Ser Asp Leu Asn Val Val	
145 150 155	
gca tct ttt gat agg cga ggg gaa tat att tat acg gga aac gca aaa	650
Ala Ser Phe Asp Arg Arg Gly Glu Tyr Ile Tyr Thr Gly Asn Ala Lys	
160 165 170	
ggc aag att ttg gtc cta aaa aca gat tct cag gat ctt gtt gct tcc	698
Gly Lys Ile Leu Val Leu Lys Thr Asp Ser Gln Asp Leu Val Ala Ser	
175 180 185	
ttc aga gtg aca act gga aca agc aat acc aca gcc att aag tca att	746
Phe Arg Val Thr Thr Gly Thr Ser Asn Thr Thr Ala Ile Lys Ser Ile	
190 195 200 205	
gag ttt gcc cgg aag ggg agt tgc ttt tta att aac acg gca gat cga	794
Glu Phe Ala Arg Lys Gly Ser Cys Phe Leu Ile Asn Thr Ala Asp Arg	
210 215 220	
ata atc aga gtt tat gat ggc aga gaa atc tta aca tgt gga aga gat	842
Ile Ile Arg Val Tyr Asp Gly Arg Glu Ile Leu Thr Cys Gly Arg Asp	
225 230 235	
gga gag cct gaa cct atg cag gaa ttg cag gat ttg gtg aat agg acc	890
Gly Glu Pro Glu Pro Met Gln Glu Leu Gln Asp Leu Val Asn Arg Thr	
240 245 250	
cca tgg aag aaa tgt tgt ttc tct ggg gat ggg gaa tac atc gtg gca	938
Pro Trp Lys Lys Cys Cys Phe Ser Gly Asp Gly Glu Tyr Ile Val Ala	
255 260 265	
ggt tct gcc cgg cag cat gcc ctg tac atc tgg gag aag agc att ggc	986
Gly Ser Ala Arg Gln His Ala Leu Tyr Ile Trp Glu Lys Ser Ile Gly	
270 275 280 285	
aac ctg gtg aag att ctc cat ggg acg aga gga gaa ctc ctc ttg gat	1034
Asn Leu Val Lys Ile Leu His Gly Thr Arg Gly Glu Leu Leu Leu Asp	
290 295 300	
gta gct tgg cat cct gtt cga ccc atc ata gca tcc att tcc agt gga	1082
Val Ala Trp His Pro Val Arg Pro Ile Ile Ala Ser Ile Ser Ser Gly	
305 310 315	
gtg gta tct atc tgg gca cag aat caa gta gaa aac tgg agt gca ttt	1130
Val Val Ser Ile Trp Ala Gln Asn Gln Val Glu Asn Trp Ser Ala Phe	
320 325 330	
gca cca gac ttc aaa gaa ttg gat gaa aat gta gaa tac gaa gaa agg	1178
Ala Pro Asp Phe Lys Glu Leu Asp Glu Asn Val Glu Tyr Glu Glu Arg	
335 340 345	
gaa tca ggg ttt gat att gaa gat gaa gat aag agt gag cct gag cag	1226
Glu Ser Gly Phe Asp Ile Glu Asp Glu Asp Lys Ser Glu Pro Glu Gln	
350 355 360 365	
aca ggg gct gat gct gca gaa gat gag gaa gtg gat gtc acc agc gtg	1274
Thr Gly Ala Asp Ala Ala Glu Asp Glu Glu Val Asp Val Thr Ser Val	
370 375 380	
gac cct att gct gcc ttc tgt agc agt gat gaa gag ctg gaa gat tca	1322
Asp Pro Ile Ala Ala Phe Cys Ser Ser Asp Glu Glu Leu Glu Asp Ser	
385 390 395	

aag gct cta ttg tat tta ccc att gcc cct gag gta gaa gac cca gaa	1370
Lys Ala Leu Leu Tyr Leu Pro Ile Ala Pro Glu Val Glu Asp Pro Glu	
400 405 410	
gaa aat cct tac ggc ccc cca ccg gat gca gtc caa acc tcc ttg atg	1418
Glu Asn Pro Tyr Gly Pro Pro Pro Asp Ala Val Gln Thr Ser Leu Met	
415 420 425	
gat gaa ggg gct agt tca gag aag aag agg cag tcc tca gca gat ggg	1466
Asp Glu Gly Ala Ser Ser Glu Lys Lys Arg Gln Ser Ser Ala Asp Gly	
430 435 440 445	
tcc cag cca cct aag aag aaa ccc aaa aca acc aat ata gaa ctt caa	1514
Ser Gln Pro Pro Lys Lys Lys Pro Lys Thr Thr Asn Ile Glu Leu Gln	
450 455 460	
gga gta cca aat gat gaa gtc cat cca cta ctg ggt gtg aag ggg gat	1562
Gly Val Pro Asn Asp Glu Val His Pro Leu Leu Gly Val Lys Gly Asp	
465 470 475	
ggc aaa tcc aag aag aag caa gca ggc cgg cct aaa gga tca aaa ggt	1610
Gly Lys Ser Lys Lys Lys Gln Ala Gly Arg Pro Lys Gly Ser Lys Gly	
480 485 490	
aaa gag aaa gat tct cca ttt aaa ccg aaa ctc tac aaa ggg gac aga	1658
Lys Glu Lys Asp Ser Pro Phe Lys Pro Lys Leu Tyr Lys Gly Asp Arg	
495 500 505	
ggg tta cct ctg gaa gga tca gcg aag ggt aaa gtg cag gcg gaa ctc	1706
Gly Leu Pro Leu Glu Gly Ser Ala Lys Gly Lys Val Gln Ala Glu Leu	
510 515 520 525	
agc cag ccc ttg aca gca gga gga gca atc tca gaa ctg tta tga aga	1754
Ser Gln Pro Leu Thr Ala Gly Gly Ala Ile Ser Glu Leu Leu *	
530 535 540	
ccttcgaagt tcttcattct ttctcacttt gccatcatgt ggcctctgga cactgtggtc	1814
agtcatttga aaattgactt taatttaaaa caaaggcctg tgccctccac ccaggagggtg	1874
ggaggggtgaa ttttatgttt aaatgaagaa gtgaattatg gaagaagagt atacgacctt	1934
cccttccctt tcaagcataa gtccaaatag actctcagga atgaagattt gtgaagacat	1994
cagataggaa ttttgactca tttaaacttt gatgcttagt tatgttgctg gagaaaagat	2054
acttatgttt tgctcatcta acttcattgt acccagcgtc attttgacat gtcatttctt	2114
atctcccat tgccttcggg cctcaatgca tgtctttgag tgacttctta tctgaaattt	2174
tgctactggg atcctaggaa agcttttggg ggatactctc attttaaaact tctcctctcc	2234
ccagatacct cctatatttc catattgtgt gcaaaggatg ggcagaaaag aaagtgcttg	2294
aaagatttca aattttcaga aagggaacaa cgaaggccct ctcttcctct cataccacgt	2354
tttgctcaag aagctgggct gtaacaattc aggggtttcc cttgttttcc tctcattgca	2414
tgtttccctc caatattggg tcattgtcat caatcatggg ttttgaagat agctagtttt	2474
atccatctcc agcaaagaat catcaatagt ttatattgct ttacctgtgc tggcttccag	2534
agatggaaac aaaccaggt gtctctcaac aagctacttt tttactgggg tgggggaatc	2594

tatgcaagga gtaaagtaaa accatccaga atcaaagcag caaccacata gttcaaata 2654
aagatcaagg tgaatttttt gttactctgc ctgtggaaat ctatcctcat cagtcattgc 2714
atttttccct gcctatacct gtgctccttt ttcttactgt gttttcagtc acttcctttc 2774
tgtgaaagg tgccttagctt tttttttgac atttgttggt ctttatataa aaataacaga 2834
ttggatagat gtgtacattt ggtgtttgaa attctctgaa aatcccatta ggaaaccagg 2894
tgtgaaaagg gctcagtagc ttctctgagt ggcgttttta gctgactgga agtgcttaat 2954
ctggatcgtc tttttttttt tttttttttt tcaatatttt aaaaggagaa tttaaatact 3014
gtgcttactg tgaaatatat cagttggtga gccgggcgtg gtgggtcacg cctgtaatcc 3074
cagcactttg ggaggccaag gcgggttgat caccgaggt caggagtcca agaccagcct 3134
ggccaacatg gtgaaagcct gtatctatta aaagacaaaa attagctggg cgtggtggtg 3194
catgcctgta atcccagcta cactggaggc tgagtcagga gaatcacttg aacgtgggag 3254
gcagagggtg cagtgagtgg agatcgacc actgccctcc agcctagggtg acagaatgag 3314
actctatctc aaaaaaaaaa aa 3336

<210> 901
<211> 2650
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (201)..(2501)

<400> 901
cgtccggaat tcccgggtcg acccacgcgt ccgcaagggc cctttacatt gcgttcttaa 60
cggttcagtc accttaaccg ttattattca cttgcgggag agaagtccga gctagggatc 120
ctgaaaagga gggaacaatt gttgtagcag gtctaaaagt tcaggtccag ccccggtttc 180
tctggattct gtgcttctcc atg gag gaa act caa gga gaa ctg aca agt 230
Met Glu Glu Thr Gln Gly Glu Leu Thr Ser
1 5 10
tct tgt ggt tct aaa acc atg gcc aat gta tct ttg gca ttt agg gat 278
Ser Cys Gly Ser Lys Thr Met Ala Asn Val Ser Leu Ala Phe Arg Asp
15 20 25
gtg tcc ata gac ctc tcc caa gag gag tgg gag tgc ctg gac gct gtg 326
Val Ser Ile Asp Leu Ser Gln Glu Glu Trp Glu Cys Leu Asp Ala Val
30 35 40
cag agg gac ttg tac aag gat gtg atg ttg gag aac tac agc aac ctg 374
Gln Arg Asp Leu Tyr Lys Asp Val Met Leu Glu Asn Tyr Ser Asn Leu
45 50 55
gtc tca ctg gat ttg gaa tac aag tat att acc aag aat ttg ctt tca 422
Val Ser Leu Asp Leu Glu Tyr Lys Tyr Ile Thr Lys Asn Leu Leu Ser
60 65 70

gaa aag aat gtt tgc aaa atc tat tta tct caa ttg cag aca ggg gaa	470
Glu Lys Asn Val Cys Lys Ile Tyr Leu Ser Gln Leu Gln Thr Gly Glu	
75 80 85 90	
aaa agt aaa aac acc atc cat gag gac acc att ttc aga aat ggt ttg	518
Lys Ser Lys Asn Thr Ile His Glu Asp Thr Ile Phe Arg Asn Gly Leu	
95 100 105	
cag tgt aaa cat gaa ttt gag aga caa gag aga cat cag atg gga tgc	566
Gln Cys Lys His Glu Phe Glu Arg Gln Glu Arg His Gln Met Gly Cys	
110 115 120	
gtt agt caa atg cta atc caa aaa caa ata tct cat cct cta cat cca	614
Val Ser Gln Met Leu Ile Gln Lys Gln Ile Ser His Pro Leu His Pro	
125 130 135	
aaa att cat gct aga gag aaa tca tat gaa tgt aag gaa tgt aga aag	662
Lys Ile His Ala Arg Glu Lys Ser Tyr Glu Cys Lys Glu Cys Arg Lys	
140 145 150	
gcc ttt aga caa cag tca tac ctt att caa cat ctg aga att cac act	710
Ala Phe Arg Gln Gln Ser Tyr Leu Ile Gln His Leu Arg Ile His Thr	
155 160 165 170	
ggg gag aga ccc tat aaa tgt atg gaa tgt gga aag gcc ttt tgt cga	758
Gly Glu Arg Pro Tyr Lys Cys Met Glu Cys Gly Lys Ala Phe Cys Arg	
175 180 185	
gtg gga gac ctt aga gta cat cac aca atc cat gct ggg gag aga ccc	806
Val Gly Asp Leu Arg Val His His Thr Ile His Ala Gly Glu Arg Pro	
190 195 200	
tat gaa tgt aaa gaa tgt ggg aag gcc ttt aga ctt cat tat cac ctt	854
Tyr Glu Cys Lys Glu Cys Gly Lys Ala Phe Arg Leu His Tyr His Leu	
205 210 215	
act gaa cat cag aga ata cat tct ggt gtg aaa ccc tac gag tgt aag	902
Thr Glu His Gln Arg Ile His Ser Gly Val Lys Pro Tyr Glu Cys Lys	
220 225 230	
gaa tgt ggg aaa gcc ttt agt cgt gtt aga gac ctt aga gta cat cag	950
Glu Cys Gly Lys Ala Phe Ser Arg Val Arg Asp Leu Arg Val His Gln	
235 240 245 250	
aca att cat gct gga gag aga cct tat gaa tgc aaa gaa tgt ggg aag	998
Thr Ile His Ala Gly Glu Arg Pro Tyr Glu Cys Lys Glu Cys Gly Lys	
255 260 265	
gcc ttt aga ctt cat tat caa cta act gaa cat caa aga att cat act	1046
Ala Phe Arg Leu His Tyr Gln Leu Thr Glu His Gln Arg Ile His Thr	
270 275 280	
ggg gag agg cct tat gaa tgt aag gtt tgt ggc aag acc ttt agg gta	1094
Gly Glu Arg Pro Tyr Glu Cys Lys Val Cys Gly Lys Thr Phe Arg Val	
285 290 295	
caa cga cat att agt caa cat cag aaa att cat act ggt gtc aaa ccc	1142
Gln Arg His Ile Ser Gln His Gln Lys Ile His Thr Gly Val Lys Pro	
300 305 310	
tat aaa tgt aat gaa tgt ggg aag gcc ttt agt cat ggc tca tac ctt	1190
Tyr Lys Cys Asn Glu Cys Gly Lys Ala Phe Ser His Gly Ser Tyr Leu	
315 320 325 330	

gtt caa cat cag aaa att cat act ggt gaa aaa ccc tac gaa tgt aaa	1238
Val Gln His Gln Lys Ile His Thr Gly Glu Lys Pro Tyr Glu Cys Lys	
335 340 345	
gaa tgt ggt aag tcc ttt agt ttt cat gca gaa ctt gct cga cat cgt	1286
Glu Cys Gly Lys Ser Phe Ser Phe His Ala Glu Leu Ala Arg His Arg	
350 355 360	
aga att cat act ggt gag aaa ccc tat gaa tgt aga gaa tgt gga aaa	1334
Arg Ile His Thr Gly Glu Lys Pro Tyr Glu Cys Arg Glu Cys Gly Lys	
365 370 375	
gcc ttt cgt ctt caa acg gaa ctt act cgg cat cat aga act cat act	1382
Ala Phe Arg Leu Gln Thr Glu Leu Thr Arg His His Arg Thr His Thr	
380 385 390	
ggt gag aaa ccc tat gaa tgt aag gaa tgt ggg aag gcc ttt att tgt	1430
Gly Glu Lys Pro Tyr Glu Cys Lys Glu Cys Gly Lys Ala Phe Ile Cys	
395 400 405 410	
ggt tat caa ctt act tta cat ctg aga act cac acc ggt gag att ccc	1478
Gly Tyr Gln Leu Thr Leu His Leu Arg Thr His Thr Gly Glu Ile Pro	
415 420 425	
tat gaa tgt aag gaa tgt gga aaa acc ttc agt agt cgc tat cat ctc	1526
Tyr Glu Cys Lys Glu Cys Gly Lys Thr Phe Ser Ser Arg Tyr His Leu	
430 435 440	
act caa cac tac aga att cat act ggt gag aaa ccc tac ata tgt aac	1574
Thr Gln His Tyr Arg Ile His Thr Gly Glu Lys Pro Tyr Ile Cys Asn	
445 450 455	
gaa tgt gga aaa gcc ttt cgt ctt caa gga gaa ctt acc cga cat cac	1622
Glu Cys Gly Lys Ala Phe Arg Leu Gln Gly Glu Leu Thr Arg His His	
460 465 470	
aga att cat aca tgt gag aaa ccc tat gaa tgt aag gaa tgt ggg aag	1670
Arg Ile His Thr Cys Glu Lys Pro Tyr Glu Cys Lys Glu Cys Gly Lys	
475 480 485 490	
gct ttt att cat agc aat caa ttt att tca cac cag cga att cac acc	1718
Ala Phe Ile His Ser Asn Gln Phe Ile Ser His Gln Arg Ile His Thr	
495 500 505	
agt gag agc acc tac ata tgt aaa gaa tgt ggg aag att ttt agt cgt	1766
Ser Glu Ser Thr Tyr Ile Cys Lys Glu Cys Gly Lys Ile Phe Ser Arg	
510 515 520	
cgc tat aat ctt act caa cat ttt aaa att cat act ggt gaa aaa ccc	1814
Arg Tyr Asn Leu Thr Gln His Phe Lys Ile His Thr Gly Glu Lys Pro	
525 530 535	
tac ata tgt aat gaa tgt ggg aaa gcc ttt cga ttt caa aca gaa ctt	1862
Tyr Ile Cys Asn Glu Cys Gly Lys Ala Phe Arg Phe Gln Thr Glu Leu	
540 545 550	
act cag cat cac aga att cat act ggt gaa aaa ccc tat aaa tgt aca	1910
Thr Gln His His Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Thr	
555 560 565 570	
gaa tgt ggg aag gcc ttt att cgt agc act cat ctc acg caa cat cac	1958
Glu Cys Gly Lys Ala Phe Ile Arg Ser Thr His Leu Thr Gln His His	
575 580 585	

```

aga att cat act ggt gag aaa ccc tac gaa tgt acg gaa tgt ggg aag      2006
Arg Ile His Thr Gly Glu Lys Pro Tyr Glu Cys Thr Glu Cys Gly Lys
          590                      595                      600

acg ttt agt cgg cac tat cat ctt act caa cat cac aga ggc cat act      2054
Thr Phe Ser Arg His Tyr His Leu Thr Gln His His Arg Gly His Thr
          605                      610                      615

ggt gag aag ccc tac ata tgt aat gaa tgt ggg aat gct ttt att tgc      2102
Gly Glu Lys Pro Tyr Ile Cys Asn Glu Cys Gly Asn Ala Phe Ile Cys
          620                      625                      630

agt tat cga ctt aca tta cat caa aga att cac act ggt gag ctt cca      2150
Ser Tyr Arg Leu Thr Leu His Gln Arg Ile His Thr Gly Glu Leu Pro
          635                      640                      645                      650

tat gaa tgt aag gaa tgt gga aag acc ttt agt cgt cgg tat cat ctt      2198
Tyr Glu Cys Lys Glu Cys Gly Lys Thr Phe Ser Arg Arg Tyr His Leu
          655                      660                      665

act caa cat ttt aga ctt cat act ggt gag aaa cct tat agc tgt aaa      2246
Thr Gln His Phe Arg Leu His Thr Gly Glu Lys Pro Tyr Ser Cys Lys
          670                      675                      680

gaa tgt ggg aat gcc ttt cgt ctt caa gca gaa ctt act cga cat cac      2294
Glu Cys Gly Asn Ala Phe Arg Leu Gln Ala Glu Leu Thr Arg His His
          685                      690                      695

ata gtt cac acg ggt gag aaa ccc tat aaa tgt aaa gaa tgt ggg aaa      2342
Ile Val His Thr Gly Glu Lys Pro Tyr Lys Cys Lys Glu Cys Gly Lys
          700                      705                      710

gcc ttc agt gtt aat tca gaa ctt act cga cat cac aga att cat act      2390
Ala Phe Ser Val Asn Ser Glu Leu Thr Arg His His Arg Ile His Thr
          715                      720                      725                      730

ggt gaa aaa ccc tat caa tgt aaa gaa tgt gga aaa gcc ttt att cgt      2438
Gly Glu Lys Pro Tyr Gln Cys Lys Glu Cys Gly Lys Ala Phe Ile Arg
          735                      740                      745

agt gat caa ctt act tta cat cag aga aat cat att agt gag gaa gtc      2486
Ser Asp Gln Leu Thr Leu His Gln Arg Asn His Ile Ser Glu Glu Val
          750                      755                      760

cta tgc ata atg taa agagaatacg atggccttta gaaaatgcc tttagcagag      2541
Leu Cys Ile Met *
          765

aatttgtaat ttaagaaatt ttctgtttgt tacggaacat gtgggaatcc cttttacttc      2601

atgctcacaa tttatcagaa attatttcgt atgttaaaga gtcgaaaga      2650

```

```

<210> 902
<211> 791
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> CDS
<222> (208) .. (738)

```

<210> 903
<211> 3277
<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (145) .. (792)

<400> 903

```

cacctttcgg aattcccggg tcgacgattt cgtgggggag acggagcccc aggagtgttg      60
aagcctggaa atccccctccc ctttcccctc ccccctttac agtatcccc tccctccacc      120
ctttcccatt ctgataatct ggcc      atg act agc aga agc aca gct agg ccc      171
                               Met Thr Ser Arg Ser Thr Ala Arg Pro
                               1                               5

aat ggg caa ccc cag gcc agc aaa att tgc cag ttc aaa ttg gtc ctg      219
Asn Gly Gln Pro Gln Ala Ser Lys Ile Cys Gln Phe Lys Leu Val Leu
10                               15                               20                               25

ctg gga gaa tct gca gtg gga aag tca agc ctg gta tta cgt ttt gtc      267
Leu Gly Glu Ser Ala Val Gly Lys Ser Ser Leu Val Leu Arg Phe Val
                               30                               35                               40

aaa ggg cag ttc cat gag tac cag gag agc acc att gga gcg gcc ttc      315
Lys Gly Gln Phe His Glu Tyr Gln Glu Ser Thr Ile Gly Ala Ala Phe
                               45                               50                               55

ctc acc cag tcc gtt tgt cta gat gac aca aca gtg aag ttt gag atc      363
Leu Thr Gln Ser Val Cys Leu Asp Asp Thr Thr Val Lys Phe Glu Ile
                               60                               65                               70

tgg gac aca gct ggg cag gag cga tat cac agc tta gcc ccc atg tac      411
Trp Asp Thr Ala Gly Gln Glu Arg Tyr His Ser Leu Ala Pro Met Tyr
75                               80                               85

tac agg ggt gcc caa gct gca atc gtg gtt tac gac att act aat cag      459
Tyr Arg Gly Ala Gln Ala Ala Ile Val Val Tyr Asp Ile Thr Asn Gln
90                               95                               100                               105

gaa acc ttt gcc cga gca aag aca tgg gtg aag gaa cta cag cga cag      507
Glu Thr Phe Ala Arg Ala Lys Thr Trp Val Lys Glu Leu Gln Arg Gln
                               110                               115                               120

gcc agt cct agc atc gtt att gcc ctg gca ggg aac aaa gct gac ctg      555
Ala Ser Pro Ser Ile Val Ile Ala Leu Ala Gly Asn Lys Ala Asp Leu
125                               130                               135

gcc aac aaa cgt atg gtg gag tat gaa gag gcc cag gca tat gca gat      603
Ala Asn Lys Arg Met Val Glu Tyr Glu Glu Ala Gln Ala Tyr Ala Asp
140                               145                               150

gac aac agc tta ttg ttc atg gag act tca gcc aag aca gct atg aac      651
Asp Asn Ser Leu Leu Phe Met Glu Thr Ser Ala Lys Thr Ala Met Asn
155                               160                               165

gtg aat gat ctc ttc ctg gca ata gct aag aag ttg cca aag agt gaa      699
Val Asn Asp Leu Phe Leu Ala Ile Ala Lys Lys Leu Pro Lys Ser Glu
170                               175                               180                               185

ccc cag aat ctg gga ggt gca gca ggc cga agc cgg ggt gtg gat ctc      747
Pro Gln Asn Leu Gly Gly Ala Ala Gly Arg Ser Arg Gly Val Asp Leu
190                               195                               200

cat gaa cag tcc cag cag aac aag agc cag tgt tgt agc aac tga ggg      795

```

His	Glu	Gln	Ser	Gln	Gln	Asn	Lys	Ser	Gln	Cys	Cys	Ser	Asn	*
gg	tg	gc	ta	gc	ag	ca	ag	gc	ta	ag	aa	ta	aa	cctccatccc 855
ta	ccc	ct	ca	gc	ta	ac	gc	ca	gc	ta	gc	cc	ag	gggctg 915
cct	ct	gc	gc	ta	gc	ta	gc	ta	gc	ta	gc	cc	ag	ggcagctg 975
tt	gc	ca	gc	ta	gc	ta	gc	ta	gc	ta	gc	cc	ag	ggactta 1035
cct	tc	ca	aa	aa	aa	aa	aa	aa	aa	aa	aa	aa	aa	aa 1095
tt	tt	ct	ct	ct	ct	ct	ct	ct	ct	ct	ct	ct	ct	ct 1155
cct	tc	cc	ct	ct	ct	ct	ct	ct	ct	ct	ct	ct	ct	ct 1215
at	gc	ca	gc	aa	gc	ag	gc	ag	gc	ag	gc	ag	gc	ag 1275
gg	cc	ct	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 1335
tt	ta	tt	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 1395
gg	ag	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 1455
gg	gc	cc	ct	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 1515
tct	tc	ca	aa	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 1575
gg	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 1635
tg	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 1695
tt	tt	tc	cc	ct	ct	ct	ct	ct	ct	ct	ct	ct	ct	ct 1755
gc	act	tt	ta	at	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 1815
act	gc	cc	ct	ct	ct	ct	ct	ct	ct	ct	ct	ct	ct	ct 1875
ag	ag	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 1935
cct	tc	ca	aa	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 1995
ct	tc	ct	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 2055
gg	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 2115
act	ca	at	tt	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 2175
att	cc	ca	ct	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 2235
tt	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 2295
ca	acc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 2355
cc	ct	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 2415
ca	act	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 2475
tc	ct	ca	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 2535
gt	tc	ct	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 2595
ga	tt	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc	gc 2655

```

aatctatgaa gctgagattc tgaaggaccc agcttaggtt cttccactta ggcctcaatt 2715
cccttccttt tccaggggca gccttagttc ccatggccct gaaacacaca catttcccc 2775
ttcctttccc agaagccact ggccccccat agcaccagc gcatcctttt tacaagtgga 2835
agaactagga tggctttcca aagtcttcta gaaatgaagt tctttctctg tgcagctttc 2895
ccpcttgag caggagtga gatgtttcat tatcttgggc ctgggaaacc acttccccag 2955
gcttctccct cccccaccc ccataggaac aggatttggc cttagcttct gggcctatcg 3015
gctgccttcc ctctacttcc taccacctct tctgccttcc tttgagctct gttgggcttg 3075
gggatcttag ttttcttttg tttatttccc agctcatttt tttcttctgg tcagtttttt 3135
taaggggggg tgttgtggtt ttttgtttt gttttgcttc tgagaaagca tttgcctttc 3195
ttcctctccc aacataacaa tcgtggtaac agaatgcgac tgctgattta ccgatgtatt 3255
taatgtaagt aaaaaaaaaa aa 3277

```

```

<210> 904
<211> 2818
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> CDS
<222> (75)..(2468)

```

```

<400> 904
gaattccgga caggacgtga agatagttgg gtttggaggc ggccgccagg ccagggcccg 60
gtggacctgc cgcc atg cag gac ggt aac ttc ctg ctg tgc gcc ctg cag 110
Met Gln Asp Gly Asn Phe Leu Leu Ser Ala Leu Gln
1 5 10
cct gag gcc ggc gtg tgc tcc ctg gcg ctg ccc tct gac ctg cag ctg 158
Pro Glu Ala Gly Val Cys Ser Leu Ala Leu Pro Ser Asp Leu Gln Leu
15 20 25
gac cgc cgg ggc gcc gag ggg ccg gag gcc gag cgg ctg cgg gca gcc 206
Asp Arg Arg Gly Ala Glu Gly Pro Glu Ala Glu Arg Leu Arg Ala Ala
30 35 40
cgc gtc cag gag cag gtc cgc gcc cgc ctc ttg cag ctg gga cag cag 254
Arg Val Gln Glu Gln Val Arg Ala Arg Leu Leu Gln Leu Gly Gln Gln
45 50 55 60
ccg cgg cac aac ggg gcc gct gag ccc gag cct gag gcc gag act gcc 302
Pro Arg His Asn Gly Ala Ala Glu Pro Glu Pro Glu Ala Glu Thr Ala
65 70 75
aga ggc aca tcc agg ggg cag tac cac acc ctg cag gct ggc ttc agc 350
Arg Gly Thr Ser Arg Gly Gln Tyr His Thr Leu Gln Ala Gly Phe Ser
80 85 90
tct cgc tct cag ggc ctg agt ggg gac aag acc tgc ggc ttc cgg ccc 398
Ser Arg Ser Gln Gly Leu Ser Gly Asp Lys Thr Ser Gly Phe Arg Pro

```

95	100	105	
atc gcc aag ccg gcc tac agc cca gcc tcc tgg tcc tcc cgc tcc gcc Ile Ala Lys Pro Ala Tyr Ser Pro Ala Ser Trp Ser Ser Arg Ser Ala 110 115 120			446
gtg gat ctg agc tgc agt cgg agg ctg agt tca gcc cac aac ggg ggc Val Asp Leu Ser Cys Ser Arg Arg Leu Ser Ser Ala His Asn Gly Gly 125 130 135 140			494
agc gcc ttt ggg gcc gct ggg tac ggg ggt gcc cag ccc acc cct ccc Ser Ala Phe Gly Ala Ala Gly Tyr Gly Gly Ala Gln Pro Thr Pro Pro 145 150 155			542
atg ccc acc agg ccc gtg tcc ttc cat gag cgc ggt ggg gtt ggg agc Met Pro Thr Arg Pro Val Ser Phe His Glu Arg Gly Gly Val Gly Ser 160 165 170			590
cgg gcc gac tat gac aca ctc tcc ctg cgc tcg ctg cgg ctg ggg ccc Arg Ala Asp Tyr Asp Thr Leu Ser Leu Arg Ser Leu Arg Leu Gly Pro 175 180 185			638
ggg ggc ctg gac gac cgc tac agc ctg gtg tct gag cag ctg gag ccc Gly Gly Leu Asp Asp Arg Tyr Ser Leu Val Ser Glu Gln Leu Glu Pro 190 195 200			686
gcg gcc acc tcc acc tac agg gcc ttt gcg tac gag cgc cag gcc agc Ala Ala Thr Ser Thr Tyr Arg Ala Phe Ala Tyr Glu Arg Gln Ala Ser 205 210 215 220			734
tcc agc tcc agc cgg gca ggg ggg ctg gac tgg ccc gag gcc act gag Ser Ser Ser Ser Arg Ala Gly Gly Leu Asp Trp Pro Glu Ala Thr Glu 225 230 235			782
gtt tcc ccg agc cgg acc atc cgt gcc cct gcc gtg cgg acc ctg cag Val Ser Pro Ser Arg Thr Ile Arg Ala Pro Ala Val Arg Thr Leu Gln 240 245 250			830
cga ttc cag agc agc cac cgg agc cgc ggg gta ggc ggg gca gtg ccg Arg Phe Gln Ser Ser His Arg Ser Arg Gly Val Gly Gly Ala Val Pro 255 260 265			878
ggg gcc gtc ctg gag cca gtg gct cga gcg cca tct gtg cgc agc ctc Gly Ala Val Leu Glu Pro Val Ala Arg Ala Pro Ser Val Arg Ser Leu 270 275 280			926
agc ctc agc ctg gct gac tcg ggc cac ctg ccg gac gtg cat ggg ttc Ser Leu Ser Leu Ala Asp Ser Gly His Leu Pro Asp Val His Gly Phe 285 290 295 300			974
aac agc tac ggt agc cac cga acc ctg cag aga ctc agc agc ggt ttt Asn Ser Tyr Gly Ser His Arg Thr Leu Gln Arg Leu Ser Ser Gly Phe 305 310 315			1022
gat gac att gac ctg ccc tca gca gtc aag tac ctc atg gct tca gac Asp Asp Ile Asp Leu Pro Ser Ala Val Lys Tyr Leu Met Ala Ser Asp 320 325 330			1070
ccc aac ctg cag gtg ctg gga gcg gcc tac atc cag cac aag tgc tac Pro Asn Leu Gln Val Leu Gly Ala Ala Tyr Ile Gln His Lys Cys Tyr 335 340 345			1118
agc gat gca gcc gcc aag aag cag gcc cgc agc ctt cag gcc gtg cct Ser Asp Ala Ala Ala Lys Lys Gln Ala Arg Ser Leu Gln Ala Val Pro 350 355 360			1166

350	355	360	
agg ctg gtg aag ctc ttc aac cac gcc aac cag gaa gtg cag cgc cat			1214
Arg Leu Val Lys Leu Phe Asn His Ala Asn Gln Glu Val Gln Arg His			
365	370	375	380
gcc aca ggt gcc atg cgc aac ctc atc tac gac aac gct gac aac aag			1262
Ala Thr Gly Ala Met Arg Asn Leu Ile Tyr Asp Asn Ala Asp Asn Lys			
	385	390	395
ctg gcc ctg gtg gag gag aac ggg atc ttc gag ctg ctg cgg aca ctg			1310
Leu Ala Leu Val Glu Glu Asn Gly Ile Phe Glu Leu Leu Arg Thr Leu			
	400	405	410
cgg gag cag gat gat gag ctt cgc aaa aat gtc aca ggg atc ctg tgg			1358
Arg Glu Gln Asp Asp Glu Leu Arg Lys Asn Val Thr Gly Ile Leu Trp			
	415	420	425
aac ctt tca tcc agc gac cac ctg aag gac cgc ctg gcc aga gac acg			1406
Asn Leu Ser Ser Ser Asp His Leu Lys Asp Arg Leu Ala Arg Asp Thr			
	430	435	440
ctg gag cag ctc aca gac ctg gtg ttg agc ccc ctg tcg ggg gct ggg			1454
Leu Glu Gln Leu Thr Asp Leu Val Leu Ser Pro Leu Ser Gly Ala Gly			
	445	450	460
ggt ccc ccc ctc atc cag cag aac gcc tcg gag gcg gag atc ttc tac			1502
Gly Pro Pro Leu Ile Gln Asn Ala Ser Glu Ala Glu Ile Phe Tyr			
	465	470	475
aac gcc acc ggc ttc ctc agg aac ctc agc tca gcc tct cag gcc act			1550
Asn Ala Thr Gly Phe Leu Arg Asn Leu Ser Ser Ala Ser Gln Ala Thr			
	480	485	490
cgc cag aag atg cgg gag tgc cac ggg ctg gtg gac gcc ctg gtc acc			1598
Arg Gln Lys Met Arg Glu Cys His Gly Leu Val Asp Ala Leu Val Thr			
	495	500	505
tct atc aac cac gcc ctg gac gcg ggc aaa tgc gag gac aag agc gtg			1646
Ser Ile Asn His Ala Leu Asp Ala Gly Lys Cys Glu Asp Lys Ser Val			
	510	515	520
gag aac gcg gtg tgc gtc ctg cgg aac ctg tcc tac cgc ctc tac gac			1694
Glu Asn Ala Val Cys Val Leu Arg Asn Leu Ser Tyr Arg Leu Tyr Asp			
	525	530	540
gag atg ccg ccg tcc gcg ctg cag cgg ctg gag ggt cgc ggc cgc agg			1742
Glu Met Pro Pro Ser Ala Leu Gln Arg Leu Glu Gly Arg Gly Arg			
	545	550	555
gac ctg gcg ggg gcg ccg ccg gga gag gtc gtg ggc tgc ttc acg ccg			1790
Asp Leu Ala Gly Ala Pro Pro Gly Glu Val Val Gly Cys Phe Thr Pro			
	560	565	570
cag agc cgg cgg ctg cgc gag ctg ccc ctc gcc gcc gat gcg ctc acc			1838
Gln Ser Arg Arg Leu Arg Glu Leu Pro Leu Ala Ala Asp Ala Leu Thr			
	575	580	585
ttc gcg gag gtg tcc aag gac ccc aag ggc ctc gag tgg ctg tgg agc			1886
Phe Ala Glu Val Ser Lys Asp Pro Lys Gly Leu Glu Trp Leu Trp Ser			
	590	595	600
ccc cag atc gtg ggg ctg tac aac cgg ctg ctg cag cgc tgc gag ctc			1934
Pro Gln Ile Val Gly Leu Tyr Asn Arg Leu Leu Gln Arg Cys Glu Leu			

605	610	615	620	
aac cgg cac acg acg gag gcg gcc gcc ggg gcg ctg cag aac atc acg Asn Arg His Thr Thr Glu Ala Ala Ala Gly Ala Leu Gln Asn Ile Thr	625	630	635	1982
gca ggc gac cgc agg tgg gcg ggg gtg ctg agc cgc ctg gcc ctg gag Ala Gly Asp Arg Arg Trp Ala Gly Val Leu Ser Arg Leu Ala Leu Glu	640	645	650	2030
cag gag cgt att ctg aac ccc ctg cta gac cgt gtc agg acc gcc gac Gln Glu Arg Ile Leu Asn Pro Leu Leu Asp Arg Val Arg Thr Ala Asp	655	660	665	2078
cac cac cag ctg cgc tca ctg act ggc ctc atc cga aac ctg tct cgg His His Gln Leu Arg Ser Leu Thr Gly Leu Ile Arg Asn Leu Ser Arg	670	675	680	2126
aac gct agg aac aag gac gag atg tcc acg aag gtg gtg agc cac ctg Asn Ala Arg Asn Lys Asp Glu Met Ser Thr Lys Val Val Ser His Leu	685	690	700	2174
atc gag aag ctg ccg ggc agc gtg ggt gag aag tcc ccc cca gcc gag Ile Glu Lys Leu Pro Gly Ser Val Gly Glu Lys Ser Pro Pro Ala Glu	705	710	715	2222
gtg ctg gtc aac atc ata gct gtg ctc aac aac ctg gtg gtg gcc agc Val Leu Val Asn Ile Ile Ala Val Leu Asn Asn Leu Val Val Ala Ser	720	725	730	2270
ccc atc gct gcc cga gac ctg ctg tat ttt gac gga ctc cga aag ctc Pro Ile Ala Ala Arg Asp Leu Leu Tyr Phe Asp Gly Leu Arg Lys Leu	735	740	745	2318
atc ttc atc aag aag aag cgg gac agc ccc gac agt gag aag tcc tcc Ile Phe Ile Lys Lys Lys Arg Asp Ser Pro Asp Ser Glu Lys Ser Ser	750	755	760	2366
cgg gca gca tcc agc ctc ctg gcc aac ctg tgg cag tac aac aag ctc Arg Ala Ala Ser Ser Leu Leu Ala Asn Leu Trp Gln Tyr Asn Lys Leu	765	770	775	2414
cac cgt gac ttc cgg gcg aag ggc tat cgg aag gag gac ttc ctg ggc His Arg Asp Phe Arg Ala Lys Gly Tyr Arg Lys Glu Asp Phe Leu Gly	785	790	795	2462
cca tag gtgaagcctt ctggaggaga aggtgacgtg gccagcgtc caagggacag Pro *				2518
actcagctcc aggctgcttg gcagcccagc ctggaggaga aggctaataga cggagggggcc				2578
ccctcgctggg gccctgtgt gcatctttga gggctcctggg ccaccaggag gggcagggtc				2638
ttatagctgg, ggacttggct tccgcagggc agggggtggg gcagggctca aggctgctct				2698
gggtgatggg gtgggtgacc agtcacattg gcagaggtgg gggttggctg tggcctggca				2758
gtatcttggg atagccagca ctgggaataa agatggccat gaacagtcaa aaaaaaaaaa				2818

<400> 905																
atgtaa	atca	cacag	atg	tt	ggtag	agaaa	aagg	cat	act	ggtatt	gaaa	ctg	taa	actg	60	
gcctg	tttac	ttcgt	ctc	ct	aacaaaa	aac	acttt	gg	att	cagg	ttct	ccc	acag	cagt	ct	120
tccact	ggcc	acagt	gag	gg	gag	ctag	gtt	tccc	cagt	ct	ccag	ctag	aa	aact	cagaa	180
catct	aaaga	tctg	aaag		atg	gaa	aaa	aga	gaa	cta	aag	gct	tct	g	tt	231
					Met	Glu	Lys	Arg	Glu	Leu	Lys	Ala	Ser	Val	Pro	
					1					5					10	
aaa	ttt	gac	aag	att	cct	tgg	ctt	agt	gag	gcc	agc	ctt	gta	aac	aag	279
Lys	Phe	Asp	Lys	Ile	Pro	Trp	Leu	Ser	Glu	Ala	Ser	Leu	Val	Asn	Lys	
			15						20				25			
cca	tta	gtg	ctc	agc	ctt	ccc	aga	aga	tat	cct	cat	acc	tct	gcg	act	327
Pro	Leu	Val	Leu	Ser	Leu	Pro	Arg	Arg	Tyr	Pro	His	Thr	Ser	Ala	Thr	
			30					35					40			
ttt	ctg	act	tca	tcc	aag	aag	aat	atg	aat	ttg	cca	att	ttg	ttt	caa	375
Phe	Leu	Thr	Ser	Ser	Lys	Lys	Asn	Met	Asn	Leu	Pro	Ile	Leu	Phe	Gln	
			45				50					55				
gtt	cca	gat	gtt	tta	tct	aag	gcc	agg	agg	aac	cag	tgt	gac	tcc	atg	423
Val	Pro	Asp	Val	Leu	Ser	Lys	Ala	Arg	Arg	Asn	Gln	Cys	Asp	Ser	Met	
			60			65				70					75	
ctg	ctc	aga	aac	caa	cag	ctg	tgc	tcc	aca	tgt	caa	gaa	atg	aaa	atg	471
Leu	Leu	Arg	Asn	Gln	Gln	Leu	Cys	Ser	Thr	Cys	Gln	Glu	Met	Lys	Met	
				80					85					90		
gta	caa	cca	aga	aca	atg	aaa	atc	cca	gat	gat	cca	aaa	gca	tcc	ttt	519
Val	Gln	Pro	Arg	Thr	Met	Lys	Ile	Pro	Asp	Asp	Pro	Lys	Ala	Ser	Phe	
			95					100					105			
gag	aat	tgt	atg	agt	tat	aga	atg	agt	ctt	cat	caa	ccc	aaa	ttc	cag	567
Glu	Asn	Cys	Met	Ser	Tyr	Arg	Met	Ser	Leu	His	Gln	Pro	Lys	Phe	Gln	
			110				115					120				
act	aca	cct	gag	cct	ttc	cat	gat	gac	atc	cca	aca	gaa	aac	att	cac	615
Thr	Thr	Pro	Glu	Pro	Phe	His	Asp	Asp	Ile	Pro	Thr	Glu	Asn	Ile	His	
			125				130					135				
tac	aga	ctg	ccc	att	ctg	ggc	ccc	agg	aca	gct	gtc	ttc	cac	gga	tta	663
Tyr	Arg	Leu	Pro	Ile	Leu	Gly	Pro	Arg	Thr	Ala	Val	Phe	His	Gly	Leu	
						145				150					155	
ctg	aca	gag	gcc	tac	aaa	act	cta	aaa	gag	aga	caa	cgt	tct	tcc	ttg	711
Leu	Thr	Glu	Ala	Tyr	Lys	Thr	Leu	Lys	Glu	Arg	Gln	Arg	Ser	Ser	Leu	
				160					165					170		
ccc	aga	aag	gaa	cca	ata	ggc	aag	aca	acg	agg	cag	tga	gcg	gtag	gag	760
Pro	Arg	Lys	Glu	Pro	Ile	Gly	Lys	Thr	Thr	Arg	Gln	*				

<400> 906																
atttggccct	cgaggccaag	aattcggcac	gagcggcacg	agaggaaact	gtttaaccgg											60
atcccattgt	accagagtg	cagagccgcc	tttcagcat	gcaggggctg	ctcagcgttt											120
agtcacatca	agaaatagaa	cagaattcag	cc	atg gcc	cca aga	aag aga	ggt									173
				Met	Ala	Pro	Arg	Lys	Arg	Gly						
				1				5								
gga cga	ggt att	tca ttc	atc ttt	tgc tgt	ttc cga	aat aat	gat cac									221
Gly Arg	Gly Ile	Ser Phe	Ile Phe	Cys Cys	Phe Arg	Asn Asn	Asp His									
	10		15		20											
cca gaa	atc acg	tat cgg	ctg cga	aat gat	agc aac	ttt gcg	ctt cag									269
Pro Glu	Ile Thr	Tyr Arg	Leu Arg	Asn Asp	Ser Asn	Phe Ala	Leu Gln									
	25		30		35											
acc atg	gaa cca	gca ttg	ccc atg	ccc cct	gtg gag	gag ctg	gat gtc									317
Thr Met	Glu Pro	Ala Leu	Pro Met	Pro Pro	Val Glu	Glu Leu	Asp Val									
	40		45		50		55									
atg ttc	agt gaa	ctg gtg	gat gaa	ctg gac	ctc aca	gac aaa	cac aga									365
Met Phe	Ser Glu	Leu Val	Asp Glu	Leu Asp	Leu Thr	Asp Lys	His Arg									
		60		65			70									
gaa gcc	atg ttt	gca ctt	cca gct	gag aaa	aaa tgg	caa ata	tac tgt									413
Glu Ala	Met Phe	Ala Leu	Pro Ala	Glu Lys	Lys Trp	Gln Ile	Tyr Cys									
		75		80			85									
agc aag	aaa aag	gac cag	gaa gaa	aac aag	gga gct	aca agt	tgg cct									461
Ser Lys	Lys Lys	Asp Gln	Glu Glu	Asn Lys	Gly Ala	Thr Ser	Trp Pro									
		90		95		100										
gaa ttc	tac att	gat cag	ctc aat	tcc atg	gct gct	aga aaa	tct ctg									509
Glu Phe	Tyr Ile	Asp Gln	Leu Asn	Ser Met	Ala Ala	Arg Lys	Ser Leu									
	105		110		115											
ctg gct	tta gag	aag gaa	gaa gaa	gaa gaa	aga agt	aaa act	ata gag									557
Leu Ala	Leu Glu	Lys Glu	Glu Glu	Glu Glu	Arg Ser	Lys Thr	Ile Glu									
120			125		130		135									
agt tta	aag aca	gca ctg	agg aca	aaa cca	atg agg	ttt gta	acc aga									605
Ser Leu	Lys Thr	Ala Leu	Arg Thr	Lys Pro	Met Arg	Phe Val	Thr Arg									
		140		145			150									

ttc atc gac ttg gat ggc cta tca tgt atc ctc aac ttt cta aag acc	653
Phe Ile Asp Leu Asp Gly Leu Ser Cys Ile Leu Asn Phe Leu Lys Thr	
155 160 165	
atg gac tac gag acc tca gag tct cga ata cat act tct ctc att ggc	701
Met Asp Tyr Glu Thr Ser Glu Ser Arg Ile His Thr Ser Leu Ile Gly	
170 175 180	
tgt ata aag gcg tta atg aac aac tct caa ggc cgg gct cac gtc ctg	749
Cys Ile Lys Ala Leu Met Asn Asn Ser Gln Gly Arg Ala His Val Leu	
185 190 195	
gct cat tct gag agt att aat gta att gct cag agt ctg agc aca gag	797
Ala His Ser Glu Ser Ile Asn Val Ile Ala Gln Ser Leu Ser Thr Glu	
200 205 210 215	
aac att aaa acg aag gtg gcc gtg ctg gaa atc ttg ggc gcc gtg tgc	845
Asn Ile Lys Thr Lys Val Ala Val Leu Glu Ile Leu Gly Ala Val Cys	
220 225 230	
ctg gtt ccc ggg ggc cac aag aag gtt ctg cag gcc atg ctg cac tac	893
Leu Val Pro Gly Gly His Lys Lys Val Leu Gln Ala Met Leu His Tyr	
235 240 245	
cag aag tat gcc agc gaa agg acc cgc ttt cag aca tta att aac gac	941
Gln Lys Tyr Ala Ser Glu Arg Thr Arg Phe Gln Thr Leu Ile Asn Asp	
250 255 260	
ttg gat aaa agc act ggg cgg tat cga gat gaa gtg agt ctc aag act	989
Leu Asp Lys Ser Thr Gly Arg Tyr Arg Asp Glu Val Ser Leu Lys Thr	
265 270 275	
gcc atc atg tcc ttc att aat gca gtg ctc agc caa ggt gca gga gtg	1037
Ala Ile Met Ser Phe Ile Asn Ala Val Leu Ser Gln Gly Ala Gly Val	
280 285 290 295	
gag agt ttg gac ttt aga ctt cat ctt cgc tat gaa ttt ctg atg tta	1085
Glu Ser Leu Asp Phe Arg Leu His Leu Arg Tyr Glu Phe Leu Met Leu	
300 305 310	
gga att caa cct gta ata gat aaa tta agg gaa cac gaa aat tca aca	1133
Gly Ile Gln Pro Val Ile Asp Lys Leu Arg Glu His Glu Asn Ser Thr	
315 320 325	
tta gat agg cat tta gac ttt ttt gaa atg ctc cga aat gaa gat gaa	1181
Leu Asp Arg His Leu Asp Phe Phe Glu Met Leu Arg Asn Glu Asp Glu	
330 335 340	
cta gaa ttt gcc aaa aga ttt gaa ctg gtt cac ata gac aca aaa agt	1229
Leu Glu Phe Ala Lys Arg Phe Glu Leu Val His Ile Asp Thr Lys Ser	
345 350 355	
gca act cag atg ttt gag ctg acc agg aag agg ctg aca cat agt gaa	1277
Ala Thr Gln Met Phe Glu Leu Thr Arg Lys Arg Leu Thr His Ser Glu	
360 365 370 375	
gct tac ccg cat ttc atg tcc atc ctg cac cac tgc ctc caa atg cct	1325
Ala Tyr Pro His Phe Met Ser Ile Leu His His Cys Leu Gln Met Pro	
380 385 390	
tac aag agg agt ggc aac act gtt cag tac tgg cta cta cta gat aga	1373
Tyr Lys Arg Ser Gly Asn Thr Val Gln Tyr Trp Leu Leu Asp Arg	
395 400 405	

att ata cag cag ata gtt atc cag aat gac aaa gga cag gac cct gac Ile Ile Gln Gln Ile Val Ile Gln Asn Asp Lys Gly Gln Asp Pro Asp 410 415 420	1421
tcc aca cct ttg gaa aac ttt aat att aag aat gtc gta cga atg ttg Ser Thr Pro Leu Glu Asn Phe Asn Ile Lys Asn Val Val Arg Met Leu 425 430 435	1469
gtt aat gaa aat gaa gtt aag cag tgg aaa gaa caa gcg gaa aaa atg Val Asn Glu Asn Glu Val Lys Gln Trp Lys Glu Gln Ala Glu Lys Met 440 445 450 455	1517
aga aaa gag cac aat gag cta caa cag aaa ctg gaa aag aaa gaa cga Arg Lys Glu His Asn Glu Leu Gln Gln Lys Leu Glu Lys Lys Glu Arg 460 465 470	1565
gaa tgt gat gct aag act caa gag aag gaa gag atg atg cag acc tta Glu Cys Asp Ala Lys Thr Gln Glu Lys Glu Glu Met Met Gln Thr Leu 475 480 485	1613
aat aaa atg aaa gag aaa ctt gaa aag gag act act gag cat aag caa Asn Lys Met Lys Glu Lys Leu Glu Lys Glu Thr Thr Glu His Lys Gln 490 495 500	1661
gtc aag cag cag gtg gcg gac ctc aca gca cag ctc cat gag ctc agc Val Lys Gln Gln Val Ala Asp Leu Thr Ala Gln Leu His Glu Leu Ser 505 510 515	1709
agg agg gcc gtc tgt gct tca atc cca ggt gga ccc tcg cct gga gca Arg Arg Ala Val Cys Ala Ser Ile Pro Gly Gly Pro Ser Pro Gly Ala 520 525 530 535	1757
cca gga ggg ccc ttt cct tcc tct gtg cct gga tct ctc ctt cct ccc Pro Gly Gly Pro Phe Pro Ser Ser Val Pro Gly Ser Leu Leu Pro Pro 540 545 550	1805
cca cca ccc cca cct cta cca ggt ggg atg ctt ccc cct cca ccg cct Pro Pro Pro Pro Pro Leu Pro Gly Gly Met Leu Pro Pro Pro Pro Pro 555 560 565	1853
ccc ctc cct cca ggt ggc cct cct cct ccc cca ggg cct cct ccc tta Pro Leu Pro Pro Gly Gly Pro Pro Pro Pro Pro Gly Pro Pro Pro Leu 570 575 580	1901
ggg gca atc atg cca cct cct ggt gct cca atg ggc cta gca ctg aag Gly Ala Ile Met Pro Pro Gly Ala Pro Met Gly Leu Ala Leu Lys 585 590 595	1949
aag aaa agc att cct cag ccc aca aat gcc ctg aaa tcc ttc aac tgg Lys Lys Ser Ile Pro Gln Pro Thr Asn Ala Leu Lys Ser Phe Asn Trp 600 605 610 615	1997
tct aaa ctg ccc gag aac aaa ctg gaa gga aca gta tgg acc gaa att Ser Lys Leu Pro Glu Asn Lys Leu Glu Gly Thr Val Trp Thr Glu Ile 620 625 630	2045
gat gat aca aaa gtc ttc aaa att cta gat ctt gaa gac ctg gaa aga Asp Asp Thr Lys Val Phe Lys Ile Leu Asp Leu Glu Asp Leu Glu Arg 635 640 645	2093
acc ttc tct gcc tat caa aga cag cag aaa gaa gca gat gcc att gat Thr Phe Ser Ala Tyr Gln Arg Gln Gln Lys Glu Ala Asp Ala Ile Asp 650 655 660	2141

gac act ctg agt tcc aaa ctt aaa gtt aaa gag ctt tcg gtg att gat Asp Thr Leu Ser Ser Lys Leu Lys Val Lys Glu Leu Ser Val Ile Asp 665 670 675	2189
ggg cgg aga gct cag aat tgc aac atc ctt cta tcg agg ttg aaa tta Gly Arg Arg Ala Gln Asn Cys Asn Ile Leu Leu Ser Arg Leu Lys Leu 680 685 690 695	2237
tcc aat gac gaa atc aaa cgg gca att cta aca atg gac gaa cag gaa Ser Asn Asp Glu Ile Lys Arg Ala Ile Leu Thr Met Asp Glu Gln Glu 700 705 710	2285
gat ctg ccc aag gac atg ttg gaa cag ctc ttg aaa ttt gtt cct gaa Asp Leu Pro Lys Asp Met Leu Glu Gln Leu Leu Lys Phe Val Pro Glu 715 720 725	2333
aaa agt gac att gac cta ttg gag gaa cat aaa cat gaa ctg gat cgg Lys Ser Asp Ile Asp Leu Leu Glu Glu His Lys His Glu Leu Asp Arg 730 735 740	2381
atg gcc aag gct gat agg ttc ctt ttt gag atg agc cga att aat cac Met Ala Lys Ala Asp Arg Phe Leu Phe Glu Met Ser Arg Ile Asn His 745 750 755	2429
tat cag caa agg ttg caa tcg ctg tac ttc aaa aag aag ttt gca gag Tyr Gln Gln Arg Leu Gln Ser Leu Tyr Phe Lys Lys Lys Phe Ala Glu 760 765 770 775	2477
cgt gtg gca gaa gtg aaa cct aaa gtg gaa gca att cgt tct ggc tca Arg Val Ala Glu Val Lys Pro Lys Val Glu Ala Ile Arg Ser Gly Ser 780 785 790	2525
gaa gag gtg ttt agg agt ggt gcc ctc aag cag ttg ctg gag gtg gtt Glu Glu Val Phe Arg Ser Gly Ala Leu Lys Gln Leu Leu Glu Val Val 795 800 805	2573
ttg gca ttt gga aat tat atg aat aaa ggt caa aga ggg aat gca tat Leu Ala Phe Gly Asn Tyr Met Asn Lys Gly Gln Arg Gly Asn Ala Tyr 810 815 820	2621
gga ttc aag ata tct agc cta aac aaa att gct gac aca aaa tcc agc Gly Phe Lys Ile Ser Ser Leu Asn Lys Ile Ala Asp Thr Lys Ser Ser 825 830 835	2669
atc gac aaa aac att acc ctt ttg cac tat ctc atc act att gtg gaa Ile Asp Lys Asn Ile Thr Leu Leu His Tyr Leu Ile Thr Ile Val Glu 840 845 850 855	2717
aat aag tac ccc agt gtt ctc aat cta aat gaa gaa ttg cga gat att Asn Lys Tyr Pro Ser Val Leu Asn Leu Asn Glu Glu Leu Arg Asp Ile 860 865 870	2765
cct caa gct gcg aaa gta aac atg act gag ctg gac aaa gaa ata agt Pro Gln Ala Ala Lys Val Asn Met Thr Glu Leu Asp Lys Glu Ile Ser 875 880 885	2813
acc ttg aga agt ggc ttg aaa gca gta gag aca gag ctg gaa tat cag Thr Leu Arg Ser Gly Leu Lys Ala Val Glu Thr Glu Leu Glu Tyr Gln 890 895 900	2861
aag tct cag ccc cca cag ccc gga gat aag ttt gtg tct gtt gtc agc Lys Ser Gln Pro Pro Gln Gln Gly Asp Lys Phe Val Ser Val Val Ser 905 910 915	2909

cag ttc atc aca gta gcc agc ttc agc ttc tct gat gtt gaa gac ctt Gln Phe Ile Thr Val Ala Ser Phe Ser Phe Ser Asp Val Glu Asp Leu 920 925 930 935	2957
cta gca gaa gct aaa gac ctg ttt act aaa gca gtg aag cac ttt ggg Leu Ala Glu Ala Lys Asp Leu Phe Thr Lys Ala Val Lys His Phe Gly 940 945 950	3005
gaa gag gct ggc aaa ata caa cca gat gag ttc ttt ggc att ttt gat Glu Glu Ala Gly Lys Ile Gln Pro Asp Glu Phe Phe Gly Ile Phe Asp 955 960 965	3053
caa ttt ctt caa gct gtg tca gaa gcc aaa caa gaa aac gaa aat atg Gln Phe Leu Gln Ala Val Ser Glu Ala Lys Gln Glu Asn Glu Asn Met 970 975 980	3101
aga aag aaa aag gag gaa gaa gaa cgt cga gct cgc atg gaa gct cag Arg Lys Lys Lys Glu Glu Glu Glu Arg Arg Ala Arg Met Glu Ala Gln 985 990 995	3149
ctc aaa gaa caa cgt gaa agg gaa cgt aaa atg aga aaa gct aaa gag Leu Lys Glu Gln Arg Glu Arg Glu Arg Lys Met Arg Lys Ala Lys Glu 1000 1005 1010 1015	3197
aat agt gaa gaa agc gga gag ttt gat gac ctt gtt tca gct tta cgc Asn Ser Glu Glu Ser Gly Glu Phe Asp Asp Leu Val Ser Ala Leu Arg 1020 1025 1030	3245
tca gga gaa gtg ttt gac aaa gac ctt tct aaa ttg aaa cgg aat cgc Ser Gly Glu Val Phe Asp Lys Asp Leu Ser Lys Leu Lys Arg Asn Arg 1035 1040 1045	3293
aaa cgt att acc aac cag atg act gac agc agc aga gag aga cca atc Lys Arg Ile Thr Asn Gln Met Thr Asp Ser Ser Arg Glu Arg Pro Ile 1050 1055 1060	3341
aca aaa ctt aat ttc taa ttttcc atgaatactt ttttttagaa agctcattag Thr Lys Leu Asn Phe *	3395
1065	
cagccctcta aagtgactag aacgtttcat tacactgcct tgcaatccaa acagtggcaa	3455
ttttttcctt catctgtgag tgaatgtgtg aacgtgtgta tgtaaagtga tgtgtgtata	3515
tattaaaaaa tgtatataga tgtctgagtgt ttgtctggag acctatacgt atggttaaaa	3575
agatttatgt taatgtatgt gctccaaaac ctttcgtgta tgcattcaca ttgagtgtgg	3635
ctcattttct tccccgaac gccatgactg ttcagaagca caatactatc tcttgaaaga	3695
gataagagac attccctaga ttcaaaggca aaacagaaga aacaaacaaa caaacaacaa	3755
aagcttgcaa aatattttat ggttttccaag cttgatatacc tttaaaatta ttttcattga	3815
tggaactgga gttgttgga aaacatagat ttaaaatgat ttttgatagc tgacattgtg	3875
atgttgatgt atcacatcag taataggacc agctttgaat ttctgacatt ggtgtgggga	3935
tacagtctgt aaatgtttat tgagaacatc ttgcacacaa tttgaattat gtagaatgtc	3995
aatcaagttt ttgtatatatt aaaagttgga catcaatttt tttccctgat ttcatcaagt	4055
tatctctgcc aagtgtctctt gataatttct tcagattttt ggaaaaaac actatataaa	4115

tgcaatccat gcttttttta aagaacaaca ttgccagagt atgcttggtc taacaatata 4175
 gatatatataa ccttaaaaat aataaaatat ctcacccaag acttaaagga agaattctct 4235
 gaagggataa agattactaa aaaaaaaaaa 4265

<210> 907
 <211> 1957
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (77) .. (1639)

<400> 907
 cggctgtagt aattcggcac gagcctcggc ggcccggctg gtgaatcaca cactctatgt 60
 tcacctgcag ccgggc atg agc ctg gag ggc ccg gct cag ccc cag tac 109
 Met Ser Leu Glu Gly Pro Ala Gln Pro Gln Tyr
 1 5 10
 agc ccc gtg cag gcc acg ttt gag gtt ctt gat ttc atc acg cac ctc 157
 Ser Pro Val Gln Ala Thr Phe Glu Val Leu Asp Phe Ile Thr His Leu
 15 20 25
 tat gct ggc gcc gac gtc cac agg cac ttg gac gtc aga atc cta ctg 205
 Tyr Ala Gly Ala Asp Val His Arg His Leu Asp Val Arg Ile Leu Leu
 30 35 40
 acc aat atc cga acc aag agc acc ttt ctc cct ccc ctg ccc acc tca 253
 Thr Asn Ile Arg Thr Lys Ser Thr Phe Leu Pro Pro Leu Pro Thr Ser
 45 50 55
 gtc cag aat ctc gcc cac ccg cca gaa gtc gtg ttg aca gat ttc cag 301
 Val Gln Asn Leu Ala His Pro Pro Glu Val Val Leu Thr Asp Phe Gln
 60 65 70 75
 acc ctg gat gga agc cag tac aac ccg gtc aaa cag cag cta gtg cgt 349
 Thr Leu Asp Gly Ser Gln Tyr Asn Pro Val Lys Gln Gln Leu Val Arg
 80 85 90
 tac gcc acc agc tgt tac agc tgt tgt ccg cga ctg gcc tcg gtg ctg 397
 Tyr Ala Thr Ser Cys Tyr Ser Cys Cys Pro Arg Leu Ala Ser Val Leu
 95 100 105
 cta tac tcc gat tat ggg ata gga gaa gtg ccc gtg gag ccc ctg gat 445
 Leu Tyr Ser Asp Tyr Gly Ile Gly Glu Val Pro Val Glu Pro Leu Asp
 110 115 120
 gtc ccc tta ccc tcc acg atc agg cca gct tcc ccc gtg gcc ggg tct 493
 Val Pro Leu Pro Ser Thr Ile Arg Pro Ala Ser Pro Val Ala Gly Ser
 125 130 135
 cca aag cag ccg gtg cgt ggc tac tac cgt ggc gct gtc ggt ggc acg 541
 Pro Lys Gln Pro Val Arg Gly Tyr Tyr Arg Gly Ala Val Gly Gly Thr
 140 145 150 155
 ttt gac cgc ctg cac aac gcc cac aag gtg ttg ctc agt gtc gcg tgc 589
 Phe Asp Arg Leu His Asn Ala His Lys Val Leu Leu Ser Val Ala Cys
 160 165 170

atc ctg gcc cag gag cag ctt gtg gtg gga gta gca gac aaa gat ctg Ile Leu Ala Gln Glu Gln Leu Val Val Gly Val Ala Asp Lys Asp Leu 175 180 185	637
ttg aag agc aag ttg ctc cct gag ctg ctc caa cct tat aca gaa cgt Leu Lys Ser Lys Leu Leu Pro Glu Leu Leu Gln Pro Tyr Thr Glu Arg 190 195 200	685
gtg gaa cat ctg agt gaa ttc ctg gtg gac atc aag ccc tcc ttg act Val Glu His Leu Ser Glu Phe Leu Val Asp Ile Lys Pro Ser Leu Thr 205 210 215	733
ttt gat gtc atc ccc ctg ctg gac ccc tat ggg ccc gct ggc tct gac Phe Asp Val Ile Pro Leu Leu Asp Pro Tyr Gly Pro Ala Gly Ser Asp 220 225 230 235	781
ccc tcc ctg gag ttc ctg gtg gtc agc gag gag acc tat cgt ggg ggg Pro Ser Leu Glu Phe Leu Val Val Ser Glu Glu Thr Tyr Arg Gly Gly 240 245 250	829
atg gcc atc aac cgc ttc cgc ctt gag aat gac ctg gag gaa ctt gct Met Ala Ile Asn Arg Phe Arg Leu Glu Asn Asp Leu Glu Glu Leu Ala 255 260 265	877
ttg tac cag atc cag ctg ctg aag gac ctc aga cat aca gag aat gaa Leu Tyr Gln Ile Gln Leu Leu Lys Asp Leu Arg His Thr Glu Asn Glu 270 275 280	925
gag gac aaa gtc agc tcc tcc agc ttc cgc cag cga atg ttg ggg aac Glu Asp Lys Val Ser Ser Ser Ser Phe Arg Gln Arg Met Leu Gly Asn 285 290 295	973
ctg ctt cgg cct cca tat gaa agg cca gag ctc ccc aca tgt ctc tat Leu Leu Arg Pro Pro Tyr Glu Arg Pro Glu Leu Pro Thr Cys Leu Tyr 300 305 310 315	1021
gta att ggg ctg act ggc atc agt ggc tct ggg aag agc tca ata gct Val Ile Gly Leu Thr Gly Ile Ser Gly Ser Gly Lys Ser Ser Ile Ala 320 325 330	1069
cag cga ctg aag ggc ctg ggg gcg ttt gtc att gac agt gac cac ctg Gln Arg Leu Lys Gly Leu Gly Ala Phe Val Ile Asp Ser Asp His Leu 335 340 345	1117
ggt cat cgg gcc tat gcc cca ggt ggc cct gcc tac cag cct gtg gtg Gly His Arg Ala Tyr Ala Pro Gly Gly Pro Ala Tyr Gln Pro Val Val 350 355 360	1165
gag gcc ttt gga aca gat att ctc cat aaa gat ggc atc atc aac agg Glu Ala Phe Gly Thr Asp Ile Leu His Lys Asp Gly Ile Ile Asn Arg 365 370 375	1213
aag gtc cta ggc agc cgg gtg ttt ggg aat aag aag cag ctg aag ata Lys Val Leu Gly Ser Arg Val Phe Gly Asn Lys Lys Gln Leu Lys Ile 380 385 390 395	1261
ctc acg gac att atg tgg cca att atc gca aag ctg gcc cga gag gag Leu Thr Asp Ile Met Trp Pro Ile Ile Ala Lys Leu Ala Arg Glu Glu 400 405 410	1309
atg gat cgg gct gtg gct gag gga aag cgt gtg tgt gtg att gat gcc Met Asp Arg Ala Val Ala Glu Gly Lys Arg Val Cys Val Ile Asp Ala 415 420 425	1357

gct gtg ttg ctt gaa gcc ggc tgg cag aac ctg gtc cat gag gtg tgg 1405
 Ala Val Leu Leu Glu Ala Gly Trp Gln Asn Leu Val His Glu Val Trp
 430 435 440

act gct gtc atc cca gag act gag gct gta aga cgc att gtg gag agg 1453
 Thr Ala Val Ile Pro Glu Thr Glu Ala Val Arg Arg Ile Val Glu Arg
 445 450 455

gat ggc ctc agt gaa gcc gcg gct caa agc cgg ctg cag agc cag atg 1501
 Asp Gly Leu Ser Glu Ala Ala Ala Gln Ser Arg Leu Gln Ser Gln Met
 460 465 470 475

agc ggg cag cag ctt gtg gaa cag agc cac gtg gtg ctc agc acc ttg 1549
 Ser Gly Gln Gln Leu Val Glu Gln Ser His Val Val Leu Ser Thr Leu
 480 485 490

tgg gag ccg cat atc acc caa cgc cag gtg gag aaa gcc tgg gcc ctc 1597
 Trp Glu Pro His Ile Thr Gln Arg Gln Val Glu Lys Ala Trp Ala Leu
 495 500 505

ttg cag aag cgc att ccc aag act cat cag gcc ctc gac tga aaagttc 1646
 Leu Gln Lys Arg Ile Pro Lys Thr His Gln Ala Leu Asp *
 510 515 520

tcagtggggc cagactggct cctggagctg acaagcgacc ccgtggtgag gagaaatggg 1706

ggccttgatg ctcaccctgg ttcaggccca gaggtccaag ctatactgtg caggacatgg 1766

ccaggcctgg tggacacagg aagcctaccc aacacgctgg tatttggccca aactgagga 1826

tgtggttcac gggggagcag tcccccccc actcttgccc atgggtgact cttaccacaca 1886

gctgactagg gccagcgcaa atactggaac ctgtaacaga attaaagggtg aatgttctga 1946

aaaaaaaaa a 1957

<210> 908
 <211> 4399
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (141)..(4133)

<400> 908

tttgatagct gtacgcctgc aggtaccggt ccggaattcc cgggtcgacg atttcgtgtg 60

gtgtgtagcc ggcttggcgt gaccctcgcc tgatccagtt gttagagttg gaagcttggc 120

agttggcctc ccttcttccc atg gag gac ggg ggc tta aca gcc ttt gaa 170
 Met Glu Asp Gly Gly Leu Thr Ala Phe Glu
 1 5 10

gag gac cag aga tgc ctt tcc cag agc ctc ccc ttg cca gtg tca gca 218
 Glu Asp Gln Arg Cys Leu Ser Gln Ser Leu Pro Leu Pro Val Ser Ala
 15 20 25

gag ggc cca gct gca cag acc act gct gag ccc agc agg tcg ttt tcc 266
 Glu Gly Pro Ala Ala Gln Thr Thr Ala Glu Pro Ser Arg Ser Phe Ser

30	35	40	
tca gcc cac aga cac ctg agc aga agg aat ggg ctt tcc aga ctc tgc Ser Ala His Arg His Leu Ser Arg Arg Asn Gly Leu Ser Arg Leu Cys 45 50 55			314
cag agc agg aca gcg ctc tct gaa gac aga tgg agc tcc tat tgt cta Gln Ser Arg Thr Ala Leu Ser Glu Asp Arg Trp Ser Ser Tyr Cys Leu 60 65 70			362
tca tca ctg gct gcc cag aat att tgt aca agt aaa ctg cac tgc cct Ser Ser Leu Ala Ala Gln Asn Ile Cys Thr Ser Lys Leu His Cys Pro 75 80 85 90			410
gct gcc cct gag cac acg gac ccg tcc gaa ccg cgg ggc agt gtg tcc Ala Ala Pro Glu His Thr Asp Pro Ser Glu Pro Arg Gly Ser Val Ser 95 100 105			458
tgc tgc tcc ctg ctg cgg gga ctg tcc tca ggg tgg tcc tca cct ctg Cys Cys Ser Leu Arg Gly Leu Ser Ser Gly Trp Ser Ser Pro Leu 110 115 120			506
ctt ccg gcc cct gtg tgc aac cct aac aag gcc atc ttc acg gtg gat Leu Pro Ala Pro Val Cys Asn Pro Asn Lys Ala Ile Phe Thr Val Asp 125 130 135			554
gcc aag acc aca gag atc ctc gtt gct aac gac aaa gct tgc ggg ctc Ala Lys Thr Thr Glu Ile Leu Val Ala Asn Asp Lys Ala Cys Gly Leu 140 145 150			602
ctg ggg tac agc agc cag gac ctg att ggc cag aag ctc acg cag ttc Leu Gly Tyr Ser Ser Gln Asp Leu Ile Gly Gln Lys Leu Thr Gln Phe 155 160 165 170			650
ttt ctg agg tca gat tct gat gtg gtg gag gcc ctc agc gag gag cac Phe Leu Arg Ser Asp Ser Asp Val Val Glu Ala Leu Ser Glu Glu His 175 180 185			698
atg gag gcc gac ggc cac gct gcg gtg gtg ttt ggc acg gtg gtg gac Met Glu Ala Asp Gly His Ala Ala Val Val Phe Gly Thr Val Val Asp 190 195 200			746
atc atc agc cgt agt ggg gag aag att cca gtg tct gtg tgg atg aag Ile Ile Ser Arg Ser Gly Glu Lys Ile Pro Val Ser Val Trp Met Lys 205 210 215			794
agg atg cgg cag gag cgc cgc cta tgc tgc gtg gtg gtc ctg gag ccc Arg Met Arg Gln Glu Arg Arg Leu Cys Cys Val Val Val Leu Glu Pro 220 225 230			842
gtg gag agg gtc tgc acc tgg gtc gct ttc cag agc gat ggc acc gtc Val Glu Arg Val Ser Thr Trp Val Ala Phe Gln Ser Asp Gly Thr Val 235 240 245 250			890
acg tca tgt gac agt ctc ttt gct cat ctt cac ggg tac gtg tct ggg Thr Ser Cys Asp Ser Leu Phe Ala His Leu His Gly Tyr Val Ser Gly 255 260 265			938
gag gac gtg gct ggg cag cat atc aca gac ctg atc cct tct gtg cag Glu Asp Val Ala Gly Gln His Ile Thr Asp Leu Ile Pro Ser Val Gln 270 275 280			986
ctc cct cct tct ggc cag cac atc cca aag aat ctc aag att cag agg Leu Pro Pro Ser Gly Gln His Ile Pro Lys Asn Leu Lys Ile Gln Arg			1034

285	290	295	
tct gtt gga aga gcc agg gac ggt acc acc ttc cct ctg agc tta aag Ser Val Gly Arg Ala Arg Asp Gly Thr Thr Phe Pro Leu Ser Leu Lys 300 305 310			1082
ctg aaa tcc caa ccc agc agc gag gag gcg acc acc ggt gag gcg gcc Leu Lys Ser Gln Pro Ser Ser Glu Glu Ala Thr Thr Gly Glu Ala Ala 315 320 325 330			1130
cct gtg agc ggc tac cgg gca tct gtc tgg gtg ttc tgc acc atc agt Pro Val Ser Gly Tyr Arg Ala Ser Val Trp Val Phe Cys Thr Ile Ser 335 340 345			1178
ggc ctc atc acc ctc ctg ccg gat ggg acc atc cac ggc atc aac cac Gly Leu Ile Thr Leu Leu Pro Asp Gly Thr Ile His Gly Ile Asn His 350 355 360			1226
agc ttc gcg ctg aca ctg ttt ggt tac gga aag acg gag ctc ctg ggc Ser Phe Ala Leu Thr Leu Phe Gly Tyr Gly Lys Thr Glu Leu Leu Gly 365 370 375			1274
aag aat atc act ttc ctg att cct ggt ttc tac agc tac atg gac ctt Lys Asn Ile Thr Phe Leu Ile Pro Gly Phe Tyr Ser Tyr Met Asp Leu 380 385 390			1322
gcg tac aac agc tca tta cag ctc cca gac ctg gcc agc tgc ctg gac Ala Tyr Asn Ser Ser Leu Gln Leu Pro Asp Leu Ala Ser Cys Leu Asp 395 400 405 410			1370
gtc ggc aat gag agt ggg tgt ggg gag aga acc ttg gac ccg tgg cag Val Gly Asn Glu Ser Gly Cys Gly Glu Arg Thr Leu Asp Pro Trp Gln 415 420 425			1418
ggc cag gac cca gct gag ggg ggc cag gat cca agg att aat gtc gtg Gly Gln Asp Pro Ala Glu Gly Gly Gln Asp Pro Arg Ile Asn Val Val 430 435 440			1466
ctt gct ggt ggc cac gtt gtg ccc cga gat gag atc cgg aag ctg atg Leu Ala Gly Gly His Val Val Pro Arg Asp Glu Ile Arg Lys Leu Met 445 450 455			1514
gaa agc caa gac atc ttc acc ggg act cag act gag ctg att gct gga Glu Ser Gln Asp Ile Phe Thr Gly Thr Gln Thr Glu Leu Ile Ala Gly 460 465 470			1562
ggc cag ctc ctt tcc tgc ctc tca cct cag cct gct cca ggg gtg gac Gly Gln Leu Leu Ser Cys Leu Ser Pro Gln Pro Ala Pro Gly Val Asp 475 480 485 490			1610
aat gtc cca gaa gga agc ctg cca gtg cac ggt gaa cag gcg ctg ccc Asn Val Pro Glu Gly Ser Leu Pro Val His Gly Glu Gln Ala Leu Pro 495 500 505			1658
aag gac cag caa atc act gcc ttg ggg aga gag gaa cct gtg gca ata Lys Asp Gln Gln Ile Thr Ala Leu Gly Arg Glu Glu Pro Val Ala Ile 510 515 520			1706
gag agc ccc gga cag gat ctt ctg gga gaa agc agg tct gaa cca gtg Glu Ser Pro Gly Gln Asp Leu Leu Gly Glu Ser Arg Ser Glu Pro Val 525 530 535			1754
gat gtg aag cca ttt gct tcc tgc gaa gat tct gaa gct cca gtc cca Asp Val Lys Pro Phe Ala Ser Cys Glu Asp Ser Glu Ala Pro Val Pro 540 545 550			1802

540	545	550	
gct gag gat ggg ggc agt gat gct ggc atg tgt ggc ctg tgt cag aag Ala Glu Asp Gly Gly Ser Asp Ala Gly Met Cys Gly Leu Cys Gln Lys 555 560 565 570			1850
gcc cag cta gag cgg atg gga gtc agt ggt ccc agc ggt tca gac ctt Ala Gln Leu Glu Arg Met Gly Val Ser Gly Pro Ser Gly Ser Asp Leu 575 580 585			1898
tgg gct ggg gct gcc gtg gcc aag ccc cag gcc aag ggt cag ctg gcg Trp Ala Gly Ala Ala Val Ala Lys Pro Gln Ala Lys Gly Gln Leu Ala 590 595 600			1946
ggg ggc agc ctc ctg atg cac tgc cct tgc tat ggg agt gaa tgg ggc Gly Gly Ser Leu Leu Met His Cys Pro Cys Tyr Gly Ser Glu Trp Gly 605 610 615			1994
ttg tgg tgg cga agc cag gac ttg gcc ccc agc ccc tct ggg atg gca Leu Trp Trp Arg Ser Gln Asp Leu Ala Pro Ser Pro Ser Gly Met Ala 620 625 630			2042
ggc ctc tcg ttt ggg aca cct act cta gat gag ccg tgg ctg gga gtg Gly Leu Ser Phe Gly Thr Pro Thr Leu Asp Glu Pro Trp Leu Gly Val 635 640 645 650			2090
gaa aac gac cga gaa gag ctg cag acc tgc ttg att aag gag cag ctg Glu Asn Asp Arg Glu Glu Leu Gln Thr Cys Leu Ile Lys Glu Gln Leu 655 660 665			2138
tcc cag ttg agc ctt gca gga gcc ctg gat gtc ccc cac gcc gaa ctc Ser Gln Leu Ser Leu Ala Gly Ala Leu Asp Val Pro His Ala Glu Leu 670 675 680			2186
gtt ccg aca gag tgc cag gct gtc acc gct cct gtg tcg tcc tgc gat Val Pro Thr Glu Cys Gln Ala Val Thr Ala Pro Val Ser Ser Cys Asp 685 690 695			2234
ctg gga ggc aga gac ctg tgc ggt ggc tgc acg ggc agc tcc tca gcc Leu Gly Gly Arg Asp Leu Cys Gly Gly Cys Thr Gly Ser Ser Ser Ala 700 705 710			2282
tgc tat gcc ttg gcc acg gac ctc cct ggg ggc ctg gaa gca gtg gag Cys Tyr Ala Leu Ala Thr Asp Leu Pro Gly Gly Leu Glu Ala Val Glu 715 720 725 730			2330
gcc cag gag gtt gat gtg aat tcg ttt tcc tgg aac ctc aag gaa ctc Ala Gln Glu Val Asp Val Asn Ser Phe Ser Trp Asn Leu Lys Glu Leu 735 740 745			2378
ttt ttc agt gac cag aca gac caa acg tca tca aat tgt tcc tgt gct Phe Phe Ser Asp Gln Thr Asp Gln Thr Ser Ser Asn Cys Ser Cys Ala 750 755 760			2426
acg tct gaa ctc aga gag aca ccc tct tcc ttg gca gtg ggc tcc gat Thr Ser Glu Leu Arg Glu Thr Pro Ser Ser Leu Ala Val Gly Ser Asp 765 770 775			2474
cca gat gta ggc agt ctc cag gaa cag ggg tcg tgt gtc ctg gat gac Pro Asp Val Gly Ser Leu Gln Glu Gln Gly Ser Cys Val Leu Asp Asp 780 785 790			2522
agg gag ctg tta cta ctg acc ggc acc tgt gtt gac ctt ggc caa ggc Arg Glu Leu Leu Leu Leu Thr Gly Thr Cys Val Asp Leu Gly Gln Gly 2570			

795	800	805	810	
cga cgg ttc cgg gag agc tgt gtg gga cat gat cca aca gaa ccg ctt Arg Arg Phe Arg Glu Ser Cys Val Gly His Asp Pro Thr Glu Pro Leu 815 820 825				2618
gag gtt tgt ttg gtg tcc tct gag cat tat gca gca agc gac aga gaa Glu Val Cys Leu Val Ser Ser Glu His Tyr Ala Ala Ser Asp Arg Glu 830 835 840				2666
agc cca gga cac gtt cct tcc acg ttg gat gct ggc cct gag gac acg Ser Pro Gly His Val Pro Ser Thr Leu Asp Ala Gly Pro Glu Asp Thr 845 850 855				2714
tgc cca tca gca gag gag cca agg ctg aac gtc cag gtc acc tcc acg Cys Pro Ser Ala Glu Glu Pro Arg Leu Asn Val Gln Val Thr Ser Thr 860 865 870				2762
ccc gtg atc gtg atg cgc ggg gct gct ggc ctg cag cgg gag atc cag Pro Val Ile Val Met Arg Gly Ala Ala Gly Leu Gln Arg Glu Ile Gln 875 880 885 890				2810
gag ggt gcc tac tcc ggg agc tgc tac cat cga gat ggc tta cgg ctg Glu Gly Ala Tyr Ser Gly Ser Cys Tyr His Arg Asp Gly Leu Arg Leu 895 900 905				2858
agt ata cag ttt gag gtg agg cgg gtg gag ctc cag ggc ccc aca cct Ser Ile Gln Phe Glu Val Arg Arg Val Glu Leu Gln Gly Pro Thr Pro 910 915 920				2906
ctg ttc tgc tgc tgg ctg gtg aaa gac ctc ctc cac agc caa cgc gac Leu Phe Cys Cys Trp Leu Val Lys Asp Leu Leu His Ser Gln Arg Asp 925 930 935				2954
tca gcc gcc agg acc cgc ctg ttc ctt gcc agc ctg ccc ggc tcc acc Ser Ala Ala Arg Thr Arg Leu Phe Leu Ala Ser Leu Pro Gly Ser Thr 940 945 950				3002
cac tct acc gct gct gag ctc acc gga ccc agc ctg gtg gaa gtg ctc His Ser Thr Ala Ala Glu Leu Thr Gly Pro Ser Leu Val Glu Val Leu 955 960 965 970				3050
aga gcc aga ccc tgg ttt gag gag ccc ccc aag gct gtg gaa ctg gag Arg Ala Arg Pro Trp Phe Glu Glu Pro Pro Lys Ala Val Glu Leu Glu 975 980 985				3098
ggg ttg gcg gcc tgt gag ggc gag tac tcc caa aag tac agt acc atg Gly Leu Ala Ala Cys Glu Gly Glu Tyr Ser Gln Lys Tyr Ser Thr Met 990 995 1000				3146
agc ccg ctg ggc agt ggg gcc ttc ggc ttc gtg tgg act gct gtg gac Ser Pro Leu Gly Ser Gly Ala Phe Gly Phe Val Trp Thr Ala Val Asp 1005 1010 1015				3194
aag gaa aaa aac aag gag gtg gtg gtg aag ttt att aag aag gag aag Lys Glu Lys Asn Lys Glu Val Val Val Lys Phe Ile Lys Lys Glu Lys 1020 1025 1030				3242
gtc ttg gag gat tgt tgg att gag gat ccc aaa ctt ggg aaa gtt act Val Leu Glu Asp Cys Trp Ile Glu Asp Pro Lys Leu Gly Lys Val Thr 1035 1040 1045 1050				3290
tta gag atc gca att cta tcc agg gtg gag cac gcc aat atc atc aag Leu Glu Ile Ala Ile Leu Ser Arg Val Glu His Ala Asn Ile Ile Lys				3338

1055	1060	1065	
gta ttg gat ata ttt gaa aac caa ggg ttc ttc cag ctt gtg atg gag Val Leu Asp Ile Phe Glu Asn Gln Gly Phe Phe Gln Leu Val Met Glu 1070 1075 1080			3386
aag cac ggc tcc ggc cta gac ctc ttc gct ttc atc gac cgc cac ccc Lys His Gly Ser Gly Leu Asp Leu Phe Ala Phe Ile Asp Arg His Pro 1085 1090 1095			3434
agg ctg gat gag ccc ctg gcg agc tac atc ttc cga caa gtg aga gca Arg Leu Asp Glu Pro Leu Ala Ser Tyr Ile Phe Arg Gln Val Arg Ala 1100 1105 1110			3482
ggc cag agc cgt cta gtg tca gca gtg gga tac ctg cgc ttg aag gac Gly Gln Ser Arg Leu Val Ser Ala Val Gly Tyr Leu Arg Leu Lys Asp 1115 1120 1125 1130			3530
atc atc cac cgt gac atc aag gat gag aac atc gtg atc gct gag gac Ile Ile His Arg Asp Ile Lys Asp Glu Asn Ile Val Ile Ala Glu Asp 1135 1140 1145			3578
ttc aca atc aag ctg ata gac ttt ggc tgc gcc gcc tac ttg gaa agg Phe Thr Ile Lys Leu Ile Asp Phe Gly Ser Ala Ala Tyr Leu Glu Arg 1150 1155 1160			3626
gga aaa tta ttt tat act ttt tgt ggg acc atc gag tac tgt gca ccg Gly Lys Leu Phe Tyr Thr Phe Cys Gly Thr Ile Glu Tyr Cys Ala Pro 1165 1170 1175			3674
gaa gtt ctc atg ggg aat ccc tac aga ggg ccg gag ctg gag atg tgg Glu Val Leu Met Gly Asn Pro Tyr Arg Gly Pro Glu Leu Glu Met Trp 1180 1185 1190			3722
tct ctg gga gtc act ctg tac acg ctg gtc ttt gag gag aac ccc ttc Ser Leu Gly Val Thr Leu Tyr Thr Leu Val Phe Glu Glu Asn Pro Phe 1195 1200 1205 1210			3770
tgt gag ctg gag gag acc gtg gag gct gcc ata cac ccg cca tac ctg Cys Glu Leu Glu Thr Val Glu Ala Ala Ile His Pro Pro Tyr Leu 1215 1220 1225			3818
gtg tcc aaa gaa ctc atg agc ctt gtg tct ggg ctg ctg cag cca gtc Val Ser Lys Glu Leu Met Ser Leu Val Ser Gly Leu Leu Gln Pro Val 1230 1235 1240			3866
cct gag aga cgc acc acc ttg gag aag ctg gtg aca gac ccg tgg gta Pro Glu Arg Arg Thr Thr Leu Glu Lys Leu Val Thr Asp Pro Trp Val 1245 1250 1255			3914
aca cag cct gtg aat ctt gct gac tat aca tgg gaa gag gtg ttt cga Thr Gln Pro Val Asn Leu Ala Asp Tyr Thr Trp Glu Glu Val Phe Arg 1260 1265 1270			3962
gta aac aag cca gaa agt gga gtt ctg tcc gct gcg agc ctg gag atg Val Asn Lys Pro Glu Ser Gly Val Leu Ser Ala Ala Ser Leu Glu Met 1275 1280 1285 1290			4010
ggg aac agg agc ctg agt gat gtg gcc cag gct cag gag ctt tgt ggg Gly Asn Arg Ser Leu Ser Asp Val Ala Gln Ala Gln Glu Leu Cys Gly 1295 1300 1305			4058
ggc ccc gtt cca ggc gag gct cct aat ggc caa ggc tgt ttg cat ccc Gly Pro Val Pro Gly Glu Ala Pro Asn Gly Gln Gly Cys Leu His Pro 1310 1315 1320			4106

1310

1315

1320

ggg gat ccc cgt ctg ctg acc agc taa acacc aattttctcc tgcttttctc 4158
 Gly Asp Pro Arg Leu Leu Thr Ser *
 1325 1330

cacttggttt ggaaaatcac acagttttca ggtccatct gtttgagaa aatacattct 4218
 gaagcatccc caattcacct tctaaaaact catgtgcagg tttgataaac accagaacag 4278
 aagacagtga tgctgtatta ttttagattt attacataga tttggaattc acttttttca 4338
 tgacctagaa aaaaacattc cagtgttcaa ctgttttata ttattaaagg gcttttaatt 4398
 t 4399

<210> 909
 <211> 4393
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (141)..(4112)

<400> 909
 tttgatagct gtacgcctgc aggtaccggt ccggaattcc cgggtcgacg atttcgtgtg 60
 gtgtgtagcc ggcttgccgt gaccctcgcc tgatccagtt gtttagagttg gaagcttggc 120
 agttggcctc ccttcttccc atg gag gac ggg ggc tta aca gcc ttt gaa 170
 Met Glu Asp Gly Gly Leu Thr Ala Phe Glu
 1 5 10
 gag gac cag aga tgc ctt tcc cag agc ctc ccc ttg cca gtg tca gca 218
 Glu Asp Gln Arg Cys Leu Ser Gln Ser Leu Pro Leu Pro Val Ser Ala
 15 20 25
 gag ggc cca gct gca cag acc act gct gag ccc agc agg tgc ttt tcc 266
 Glu Gly Pro Ala Ala Gln Thr Thr Ala Glu Pro Ser Arg Ser Phe Ser
 30 35 40
 tca gcc cac aga cac ctg agc aga agg aat ggg ctt tcc aga ctc tgc 314
 Ser Ala His Arg His Leu Ser Arg Arg Asn Gly Leu Ser Arg Leu Cys
 45 50 55
 cag agc agg aca gcg ctc tct gaa gac aga tgg agc tcc tat tgt cta 362
 Gln Ser Arg Thr Ala Leu Ser Glu Asp Arg Trp Ser Ser Tyr Cys Leu
 60 65 70
 tca tca ctg gct gcc cag aat att tgt aca agt aaa ctg cac tgc cct 410
 Ser Ser Leu Ala Ala Gln Asn Ile Cys Thr Ser Lys Leu His Cys Pro
 75 80 85 90
 gct gcc cct gag cac acg gac ccg tcc gaa ccg cgg ggc agt gtg tcc 458
 Ala Ala Pro Glu His Thr Asp Pro Ser Glu Pro Arg Gly Ser Val Ser
 95 100 105
 tgc tgc tcc ctg ctg cgg gga ctg tcc tca ggg tgg tcc tca cct ctg 506
 Cys Cys Ser Leu Leu Arg Gly Leu Ser Ser Gly Trp Ser Ser Pro Leu
 110 115 120

ctt ccg gcc cct gtg tgc aac cct aac aag gcc atc ttc acg gtg gat	554
Leu Pro Ala Pro Val Cys Asn Pro Asn Lys Ala Ile Phe Thr Val Asp	
125 130 135	
gcc aag acc aca gag atc ctc gtt gct aac gac aaa gct tgc ggg ctc	602
Ala Lys Thr Thr Glu Ile Leu Val Ala Asn Asp Lys Ala Cys Gly Leu	
140 145 150	
ctg ggg tac agc agc cag gac ctg att ggc cag aag ctc acg cag ttc	650
Leu Gly Tyr Ser Ser Gln Asp Leu Ile Gly Gln Lys Leu Thr Gln Phe	
155 160 165 170	
ttt ctg agg tca gat tct gat gtg gtg gag gcc ctc agc gag gag cac	698
Phe Leu Arg Ser Asp Ser Asp Val Val Glu Ala Leu Ser Glu Glu His	
175 180 185	
atg gag gcc gac ggc cac gct gcg gtg gtg ttt ggc acg gtg gtg gac	746
Met Glu Ala Asp Gly His Ala Ala Val Val Phe Gly Thr Val Val Asp	
190 195 200	
atc atc agc cgt agt ggg gag aag att cca gtg tct gtg tgg atg aag	794
Ile Ile Ser Arg Ser Gly Glu Lys Ile Pro Val Ser Val Trp Met Lys	
205 210 215	
agg atg cgg cag gag cgc cgc cta tgc tgc gtg gtg gtc ctg gag ccc	842
Arg Met Arg Gln Glu Arg Arg Leu Cys Cys Val Val Val Leu Glu Pro	
220 225 230	
gtg gag agg gtc tcg acc tgg gtc gct ttc cag agc gat ggc acc gtc	890
Val Glu Arg Val Ser Thr Trp Val Ala Phe Gln Ser Asp Gly Thr Val	
235 240 245 250	
acg tca tgt gac agt ctc ttt gct cat ctt cac ggg tac gtg tct ggg	938
Thr Ser Cys Asp Ser Leu Phe Ala His Leu His Gly Tyr Val Ser Gly	
255 260 265	
gag gac gtg gct ggg cag cat atc aca gac ctg atc cct tct gtg cag	986
Glu Asp Val Ala Gly Gln His Ile Thr Asp Leu Ile Pro Ser Val Gln	
270 275 280	
ctc cct cct tct ggc cag cac atc cca aag aat ctc aag att cag agg	1034
Leu Pro Pro Ser Gly Gln His Ile Pro Lys Asn Leu Lys Ile Gln Arg	
285 290 295	
tct gtt gga aga gcc agg gac ggt acc acc ttc cct ctg agc tta aag	1082
Ser Val Gly Arg Ala Arg Asp Gly Thr Thr Phe Pro Leu Ser Leu Lys	
300 305 310	
ctg aaa tcc caa ccc agc agc gag gag gcg acc acc ggt gag gcg gcc	1130
Leu Lys Ser Gln Pro Ser Ser Glu Glu Ala Thr Thr Gly Glu Ala Ala	
315 320 325 330	
cct gtg agc ggc tac cgg gca tct gtc tgg gtg ttc tgc acc atc agt	1178
Pro Val Ser Gly Tyr Arg Ala Ser Val Trp Val Phe Cys Thr Ile Ser	
335 340 345	
ggc ctc atc acc ctc ctg ccg gat ggg acc atc cac ggc atc aac cac	1226
Gly Leu Ile Thr Leu Leu Pro Asp Gly Thr Ile His Gly Ile Asn His	
350 355 360	
agc ttc gcg ctg aca ctg ttt ggt tac gga aag acg gag ctc ctg ggc	1274
Ser Phe Ala Leu Thr Leu Phe Gly Tyr Gly Lys Thr Glu Leu Leu Gly	
365 370 375	

aag aat atc act ttc ctg att cct ggt ttc tac agc tac atg gac ctt Lys Asn Ile Thr Phe Leu Ile Pro Gly Phe Tyr Ser Tyr Met Asp Leu 380 385 390	1322
gcg tac aac agc tca tta cag ctc cca gac ctg gcc agc tgc ctg gac Ala Tyr Asn Ser Ser Leu Gln Leu Pro Asp Leu Ala Ser Cys Leu Asp 395 400 405 410	1370
gtc ggc aat gag agt ggg tgt ggg gag aga acc ttg gac ccg tgg cag Val Gly Asn Glu Ser Gly Cys Gly Glu Arg Thr Leu Asp Pro Trp Gln 415 420 425	1418
ggc cag gac cca gct gag ggg ggc cag gat cca agg att aat gtc gtg Gly Gln Asp Pro Ala Glu Gly Gly Gln Asp Pro Arg Ile Asn Val Val 430 435 440	1466
ctt gct ggt ggc cac gtt gtg ccc cga gat gag atc cgg aag ctg atg Leu Ala Gly Gly His Val Val Pro Arg Asp Glu Ile Arg Lys Leu Met 445 450 455	1514
gaa agc caa gac atc ttc acc ggg act cag act gag ctg att gct gga Glu Ser Gln Asp Ile Phe Thr Gly Thr Gln Thr Glu Leu Ile Ala Gly 460 465 470	1562
ggc cag ctc ctt tcc tgc ctc tca cct cag cct gct cca ggg gtg gac Gly Gln Leu Leu Ser Cys Leu Ser Pro Gln Pro Ala Pro Gly Val Asp 475 480 485 490	1610
aat gtc cca gaa gga agc ctg cca gtg cac ggt gaa cag gcg ctg ccc Asn Val Pro Glu Gly Ser Leu Pro Val His Gly Glu Gln Ala Leu Pro 495 500 505	1658
aag gac cag caa atc act gcc ttg ggg aga gag gaa cct gtg gca ata Lys Asp Gln Gln Ile Thr Ala Leu Gly Arg Glu Glu Pro Val Ala Ile 510 515 520	1706
gag agc ccc gga cag gat ctt ctg gga gaa agc agg tct gaa cca gtg Glu Ser Pro Gly Gln Asp Leu Leu Gly Glu Ser Arg Ser Glu Pro Val 525 530 535	1754
gat gtg aag cca ttt gct tcc tgc gaa gat tct gaa gct cca gtc cca Asp Val Lys Pro Phe Ala Ser Cys Glu Asp Ser Glu Ala Pro Val Pro 540 545 550	1802
gct gag gat ggg ggc agt gat gct ggc atg tgt ggc ctg tgt cag aag Ala Glu Asp Gly Gly Ser Asp Ala Gly Met Cys Gly Leu Cys Gln Lys 555 560 565 570	1850
gcc cag cta gag cgg atg gga gtc agt ggt ccc agc ggt tca gac ctt Ala Gln Leu Glu Arg Met Gly Val Ser Gly Pro Ser Gly Ser Asp Leu 575 580 585	1898
tgg gct ggg gct gcc gtg gcc aag ccc cag gcc aag ggt cag ctg gcg Trp Ala Gly Ala Ala Val Ala Lys Pro Gln Ala Lys Gly Gln Leu Ala 590 595 600	1946
ggg ggc agc ctc ctg atg cac tgc cct tgc tat ggg agt gaa tgg ggc Gly Gly Ser Leu Leu Met His Cys Pro Cys Tyr Gly Ser Glu Trp Gly 605 610 615	1994
ttg tgg tgg cga agc cag gac ttg gcc ccc agc ccc tct ggg atg gca Leu Trp Trp Arg Ser Gln Asp Leu Ala Pro Ser Pro Ser Gly Met Ala 620 625 630	2042

ggc ctc tcg ttt ggg aca cct act cta gat gag ccg tgg ctg gga gtg Gly Leu Ser Phe Gly Thr Pro Thr Leu Asp Glu Pro Trp Leu Gly Val 635 640 645 650	2090
gaa aac gac cga gaa gag ctg cag acc tgc ttg att aag gag cag ctg Glu Asn Asp Arg Glu Glu Leu Gln Thr Cys Leu Ile Lys Glu Gln Leu 655 660 665	2138
tcc cag ttg agc ctt gca gga gcc ctg gat gtc ccc cac gcc gaa ctc Ser Gln Leu Ser Leu Ala Gly Ala Leu Asp Val Pro His Ala Glu Leu 670 675 680	2186
gtt ccg aca gag tgc cag gct gtc acc gct cct gtg tcg tcc tgc gat Val Pro Thr Glu Cys Gln Ala Val Thr Ala Pro Val Ser Ser Cys Asp 685 690 695	2234
ctg gga ggc aga gac ctg tgc ggt ggc tgc acg ggc agc tcc tca gcc Leu Gly Gly Arg Asp Leu Cys Gly Gly Cys Thr Gly Ser Ser Ser Ala 700 705 710	2282
tgc tat gcc ttg gcc acg gac ctc cct ggg ggc ctg gaa gca gtg gag Cys Tyr Ala Leu Ala Thr Asp Leu Pro Gly Gly Leu Glu Ala Val Glu 715 720 725 730	2330
gcc cag gag gtt gat gtg aat tcg ttt tcc tgg aac ctc aag gaa ctc Ala Gln Glu Val Asp Val Asn Ser Phe Ser Trp Asn Leu Lys Glu Leu 735 740 745	2378
ttt ttc agt gac cag aca gac caa acg tca tca aat tgt tcc tgt gct Phe Phe Ser Asp Gln Thr Asp Gln Thr Ser Ser Asn Cys Ser Cys Ala 750 755 760	2426
acg tct gaa ctc aga gag aca ccc tct tcc ttg gca gtg ggc tcc gat Thr Ser Glu Leu Arg Glu Thr Pro Ser Ser Leu Ala Val Gly Ser Asp 765 770 775	2474
cca gat gta ggc agt ctc cag gaa cag ggg tcg tgt gtc ctg gat gac Pro Asp Val Gly Ser Leu Gln Glu Gln Gly Ser Cys Val Leu Asp Asp 780 785 790	2522
agg gag ctg tta cta ctg acc ggc acc tgt gtt gac ctt ggc caa ggc Arg Glu Leu Leu Leu Leu Thr Gly Thr Cys Val Asp Leu Gly Gln Gly 795 800 805 810	2570
cga cgg ttc cgg gag agc tgt gtg gga cat gat cca aca gaa ccg ctt Arg Arg Phe Arg Glu Ser Cys Val Gly His Asp Pro Thr Glu Pro Leu 815 820 825	2618
gag gtt tgt ttg gtg tcc tct gag cat tat gca gca agc gac aga gaa Glu Val Cys Leu Val Ser Ser Glu His Tyr Ala Ala Ser Asp Arg Glu 830 835 840	2666
agc cca gga cac gtt cct tcc acg ttg gat gct ggc cct gag gac acg Ser Pro Gly His Val Pro Ser Thr Leu Asp Ala Gly Pro Glu Asp Thr 845 850 855	2714
tgc cca tca gca gag gag cca agg ctg aac gtc cag gtc acc tcc acg Cys Pro Ser Ala Glu Glu Pro Arg Leu Asn Val Gln Val Thr Ser Thr 860 865 870	2762
ccc gtg atc gtg atg cgc ggg gct gct ggc ctg cag cgg gag atc cag Pro Val Ile Val Met Arg Gly Ala Ala Gly Leu Gln Arg Glu Ile Gln 875 880 885 890	2810

gag ggt gcc tac tcc ggg agc tgc tac cat cga gat ggc tta cgg ctg Glu Gly Ala Tyr Ser Gly Ser Cys Tyr His Arg Asp Gly Leu Arg Leu 895 900 905	2858
agt ata cag ttt gag gtg agg cgg gtg gag ctc cag ggc ccc aca cct Ser Ile Gln Phe Glu Val Arg Arg Val Glu Leu Gln Gly Pro Thr Pro 910 915 920	2906
ctg ttc tgc tgc tgg ctg gtg aaa gac ctc ctc cac agc caa cgc gac Leu Phe Cys Cys Trp Leu Val Lys Asp Leu Leu His Ser Gln Arg Asp 925 930 935	2954
tca gcc gcc agg acc cgc ctg ttc ctt gcc agc ctg ccc ggc tcc acc Ser Ala Ala Arg Thr Arg Leu Phe Leu Ala Ser Leu Pro Gly Ser Thr 940 945 950	3002
cac tct acc gct gct gag ctc acc gga ccc agc ctg gtg gaa gtg ctc His Ser Thr Ala Ala Glu Leu Thr Gly Pro Ser Leu Val Glu Val Leu 955 960 965 970	3050
aga gcc aga ccc tgg ttt gag gag ccc ccc aag gct gtg gaa ctg gag Arg Ala Arg Pro Trp Phe Glu Glu Pro Pro Lys Ala Val Glu Leu Glu 975 980 985	3098
ggg ttg gcg gcc tgt gag ggc gag tac tcc caa aag tac agt acc atg Gly Leu Ala Ala Cys Glu Gly Glu Tyr Ser Gln Lys Tyr Ser Thr Met 990 995 1000	3146
agc ccg ctg ggc agt ggg gcc ttc ggc ttc gtg tgg act gct gtg gac Ser Pro Leu Gly Ser Gly Ala Phe Gly Phe Val Trp Thr Ala Val Asp 1005 1010 1015	3194
aag gaa aaa aac aag gag gtg gtg gtg aag ttt att aag aag gag aag Lys Glu Lys Asn Lys Glu Val Val Lys Phe Ile Lys Lys Glu Lys 1020 1025 1030	3242
gtc ttg gag gat tgt tgg att gag gat ccc aaa ctt ggg aaa gtt act Val Leu Glu Asp Cys Trp Ile Glu Asp Pro Lys Leu Gly Lys Val Thr 1035 1040 1045 1050	3290
tta gag atc gca att cta tcc agg gtg gag cac gcc aat atc atc aag Leu Glu Ile Ala Ile Leu Ser Arg Val Glu His Ala Asn Ile Ile Lys 1055 1060 1065	3338
gta ttg gat ata ttt gaa aac caa ggg ttc ttc cag ctt gtg atg gag Val Leu Asp Ile Phe Glu Asn Gln Gly Phe Phe Gln Leu Val Met Glu 1070 1075 1080	3386
aag cac ggc tcc ggc cta gac ctc ttc gct ttc atc gac cgc cac ccc Lys His Gly Ser Gly Leu Asp Leu Phe Ala Phe Ile Asp Arg His Pro 1085 1090 1095	3434
agg ctg gat gag ccc ctg gcg agc tac atc ttc cga caa cta gtg tca Arg Leu Asp Glu Pro Leu Ala Ser Tyr Ile Phe Arg Gln Leu Val Ser 1100 1105 1110	3482
gca gtg gga tac ctg cgc ttg aag gac atc atc cac cgt gac atc aag Ala Val Gly Tyr Leu Arg Leu Lys Asp Ile Ile His Arg Asp Ile Lys 1115 1120 1125 1130	3530
gat gag aac atc gtg atc gct gag gac ttc aca atc aag ctg ata gac Asp Glu Asn Ile Val Ile Ala Glu Asp Phe Thr Ile Lys Leu Ile Asp 1135 1140 1145	3578

```

ttt ggc tcg gcc gcc tac ttg gaa agg gga aaa tta ttt tat act ttt      3626
Phe Gly Ser Ala Ala Tyr Leu Glu Arg Gly Lys Leu Phe Tyr Thr Phe
      1150                      1155                      1160

tgt ggg acc atc gag tac tgt gca ccg gaa gtt ctc atg ggg aat ccc      3674
Cys Gly Thr Ile Glu Tyr Cys Ala Pro Glu Val Leu Met Gly Asn Pro
      1165                      1170                      1175

tac aga ggg ccg gag ctg gag atg tgg tct ctg gga gtc act ctg tac      3722
Tyr Arg Gly Pro Glu Leu Glu Met Trp Ser Leu Gly Val Thr Leu Tyr
      1180                      1185                      1190

acg ctg gtc ttt gag gag aac ccc ttc tgt gag ctg gag gag acc gtg      3770
Thr Leu Val Phe Glu Glu Asn Pro Phe Cys Glu Leu Glu Glu Thr Val
1195                      1200                      1205                      1210

gag gct gcc ata cac ccg cca tac ctg gtg tcc aaa gaa ctc atg agc      3818
Glu Ala Ala Ile His Pro Pro Tyr Leu Val Ser Lys Glu Leu Met Ser
      1215                      1220                      1225

ctt gtg tct ggg ctg ctg cag cca gtc cct gag aga cgc acc acc ttg      3866
Leu Val Ser Gly Leu Leu Gln Pro Val Pro Glu Arg Arg Thr Thr Leu
      1230                      1235                      1240

gag aag ctg gtg aca gac ccg tgg gta aca cag cct gtg aat ctt gct      3914
Glu Lys Leu Val Thr Asp Pro Trp Val Thr Gln Pro Val Asn Leu Ala
      1245                      1250                      1255

gac tat aca tgg gaa gag gtg ttt cga gta aac aag cca gaa agt gga      3962
Asp Tyr Thr Trp Glu Glu Val Phe Arg Val Asn Lys Pro Glu Ser Gly
      1260                      1265                      1270

gtt ctg tcc gct gcg agc ctg gag atg ggg aac agg agc ctg agt gat      4010
Val Leu Ser Ala Ala Ser Leu Glu Met Gly Asn Arg Ser Leu Ser Asp
1275                      1280                      1285                      1290

gtg gcc cag gct cag gag ctt tgt ggg ggc ccc gtt cca ggc gag gct      4058
Val Ala Gln Ala Gln Glu Leu Cys Gly Gly Pro Val Pro Gly Glu Ala
      1295                      1300                      1305

cct aat ggc caa ggc tgt ttg cat ccc ggg gat ccc cgt ctg ctg acc      4106
Pro Asn Gly Gln Gly Cys Leu His Pro Gly Asp Pro Arg Leu Leu Thr
      1310                      1315                      1320

agc taa acaccaatTT cttcctgctt ttctccactt ggtttggaaa atcacacagt      4162
Ser *

tttcaggctc catctgtttg gagaaaatac attctgaagc atccccaatt caccttctaa      4222

aaactcatgt gcaggtttga taaacaccag aacagaagac agtgatgctg tattatttta      4282

gatttattac atagatttgg aattcacttt tttcatgacc tagaaaaaaaa cattccagtg      4342

ttcaactgtt ttatattatt aaagggtttt taatttgtga aaaaaaaaaa a          4393

```

```

<210> 910
<211> 3042
<212> DNA
<213> Homo sapiens

```

<220>

<221> CDS

<222> (402) .. (2069)

<400> 910

gaattcgcg	ccgctcgacg	ctcagcagag	ctaccagctg	ccctgttggc	ttcgtctggtc	60
ggatcgctct	cctggccccg	ccaaacaggc	ggggggagcg	gccccgactg	tggggccatg	120
gcagtagtct	cctcgttctc	cgccgccgct	agcctagctg	agtcgccggc	ttctgcgcta	180
ggggctccca	ccgcctccgc	aggctaagga	gccgctgcca	ccaacgagct	gtgaggggta	240
ctatgctccc	tctttgccgc	cgtctcctcc	tcttgccccg	gcaggcaccc	ctctggctgc	300
tcagtctctg	ctcagtgtca	aaccagaaga	gaagtaaaat	tcaacaaaaa	tttatgtgtg	360
gagttccttc	ttaaaagaag	aaaaaagtga	ttatttagac	t	atg gat cgg agc	413
					Met Asp Arg Ser	
					1	
aaa cgg aat tca att gca gga ttt cct cca cgt gtg gag cgt ctt gaa	461					
Lys Arg Asn Ser Ile Ala Gly Phe Pro Pro Arg Val Glu Arg Leu Glu						
5 10 15 20						
gag ttt gaa gga ggt ggt gga gga gaa gga aat gtg agc cag gtg gga	509					
Glu Phe Glu Gly Gly Gly Gly Glu Gly Asn Val Ser Gln Val Gly						
25 30 35						
aga gtt tgg cca tct tcg tat cga gct ctt ata agt gcc ttt tcc aga	557					
Arg Val Trp Pro Ser Ser Tyr Arg Ala Leu Ile Ser Ala Phe Ser Arg						
40 45 50						
ctg acg cgt ttg gat gat ttc acc tgt gaa aaa ata ggg tct ggc ttc	605					
Leu Thr Arg Leu Asp Asp Phe Thr Cys Glu Lys Ile Gly Ser Gly Phe						
55 60 65						
ttt tct gaa gtg ttc aag gta cga cac cga gct tct ggt cag gtg atg	653					
Phe Ser Glu Val Phe Lys Val Arg His Arg Ala Ser Gly Gln Val Met						
70 75 80						
gct ctt aag atg aac aca ttg agc agt aac cgg gca aac atg ctg aaa	701					
Ala Leu Lys Met Asn Thr Leu Ser Ser Asn Arg Ala Asn Met Leu Lys						
85 90 95 100						
gaa gta cag ctc atg aat aga ctc tcc cat ccc aac atc ctt agg tat	749					
Glu Val Gln Leu Met Asn Arg Leu Ser His Pro Asn Ile Leu Arg Tyr						
105 110 115						
atc aac tcc ggg aac ctg gaa cag ttg cta gac agt aac ctg cat ttg	797					
Ile Asn Ser Gly Asn Leu Glu Gln Leu Leu Asp Ser Asn Leu His Leu						
120 125 130						
cct tgg act gtg agg gta aaa ctg gcc tat gac ata gca gtg ggc ctc	845					
Pro Trp Thr Val Arg Val Lys Leu Ala Tyr Asp Ile Ala Val Gly Leu						
135 140 145						
agc tac ctt cac ttc aaa ggc att ttt cat cgg gac ctc aca tct aag	893					
Ser Tyr Leu His Phe Lys Gly Ile Phe His Arg Asp Leu Thr Ser Lys						
150 155 160						
aac tgc ctg ata aag agg gat gag aat ggt tac tct gca gtg gta gct	941					
Asn Cys Leu Ile Lys Arg Asp Glu Asn Gly Tyr Ser Ala Val Val Ala						

165	170	175	180	
gac ttt ggc ctg gct gag aag atc ccc gat gtc agc atg ggg agt gag Asp Phe Gly Leu Ala Glu Lys Ile Pro Asp Val Ser Met Gly Ser Glu	185	190	195	989
aag ctg gcc gtg gtg ggt tcc cca ttc tgg atg gca cct gag gtt ctc Lys Leu Ala Val Val Gly Ser Pro Phe Trp Met Ala Pro Glu Val Leu	200	205	210	1037
cga gat gag ccc tat aat gaa aag gca gat gtg ttc tct tat ggt atc Arg Asp Glu Pro Tyr Asn Glu Lys Ala Asp Val Phe Ser Tyr Gly Ile	215	220	225	1085
atc ctc tgc gag atc atc gcc cgc atc cag gcc gat ccg gac tat ctt Ile Leu Cys Glu Ile Ile Ala Arg Ile Gln Ala Asp Pro Asp Tyr Leu	230	235	240	1133
ccc cgc aca gag aat ttc ggg ctg gac tat gat gct ttc cag cac atg Pro Arg Thr Glu Asn Phe Gly Leu Asp Tyr Asp Ala Phe Gln His Met	245	250	255	1181
gtg gga gac tgt ccc cca gat ttt ctg caa ctt act ttc aac tgc tgt Val Gly Asp Cys Pro Pro Asp Phe Leu Gln Leu Thr Phe Asn Cys Cys	265	270	275	1229
aac atg gat ccc aaa ctg cgc cca tct ttt gtg gag att ggg aag acc Asn Met Asp Pro Lys Leu Arg Pro Ser Phe Val Glu Ile Gly Lys Thr	280	285	290	1277
ctg gag gaa att ctg agc cgc cta cag gaa gaa gag cag gag agg gat Leu Glu Glu Ile Leu Ser Arg Leu Gln Glu Glu Gln Glu Arg Asp	295	300	305	1325
agg aag ctg cag ccc aca gcc agg gga ctc ttg gag aaa gca cct ggg Arg Lys Leu Gln Pro Thr Ala Arg Gly Leu Leu Glu Lys Ala Pro Gly	310	315	320	1373
gtg aag cga cta agc tca ctg gat gac aag atc ccc cac aag tca cca Val Lys Arg Leu Ser Ser Leu Asp Asp Lys Ile Pro His Lys Ser Pro	325	330	335	1421
tgc cca aga cgt acc atc tgg ctg tct cga agc cag tca gat atc ttt Cys Pro Arg Arg Thr Ile Trp Leu Ser Arg Ser Gln Ser Asp Ile Phe	345	350	355	1469
tcc cgt aag ccc cca cgt aca gtg agt gtc ttg gac cca tac tac cgg Ser Arg Lys Pro Pro Arg Thr Val Ser Val Leu Asp Pro Tyr Tyr Arg	360	365	370	1517
cca cga gat ggt gct gcc cgc acc ccc aaa gtc aac cct ttt agt gct Pro Arg Asp Gly Ala Ala Arg Thr Pro Lys Val Asn Pro Phe Ser Ala	375	380	385	1565
cgc cag gac ctc atg ggg ggc aag atc aag ttt ttt gac ctg ccc agc Arg Gln Asp Leu Met Gly Gly Lys Ile Lys Phe Phe Asp Leu Pro Ser	390	395	400	1613
aag tct gtc atc tct ctg gta ttt gac ctg gat gca cca ggg ccc gga Lys Ser Val Ile Ser Leu Val Phe Asp Leu Asp Ala Pro Gly Pro Gly	405	410	415	1661
act atg ccc ctg gct gac tgg cag gag ccc ctg gcc cca cct att cgc Thr Met Pro Leu Ala Asp Trp Gln Glu Pro Leu Ala Pro Pro Ile Arg				1709

425	430	435	
cgg tgg cgt tcc ttg cct ggt tgg cct gag ttc ttg cat caa gag gct			1757
Arg Trp Arg Ser Leu Pro Gly Ser Pro Glu Phe Leu His Gln Glu Ala			
440	445	450	
tgt cca ttt gtg ggc cgg gaa gaa tgg cta tct gat ggg ccc cca cca			1805
Cys Pro Phe Val Gly Arg Glu Glu Ser Leu Ser Asp Gly Pro Pro Pro			
455	460	465	
cgc cta agt agt ctc aag tac aga gtt aaa gag atc cca cca ttc cgg			1853
Arg Leu Ser Ser Leu Lys Tyr Arg Val Lys Glu Ile Pro Pro Phe Arg			
470	475	480	
gca tct gcc cta cca gct gct caa gcc cat gag gct atg gac tgc tcc			1901
Ala Ser Ala Leu Pro Ala Ala Gln Ala His Glu Ala Met Asp Cys Ser			
485	490	495	500
att ctc cag gaa gaa aat ggt ttt ggg tcc agg ccc cag ggg acc agt			1949
Ile Leu Gln Glu Asn Gly Phe Gly Ser Arg Pro Gln Gly Thr Ser			
505	510	515	
cca tgc cct gcg ggt gct tct gag gag atg gag gta gaa gaa agg cca			1997
Pro Cys Pro Ala Gly Ala Ser Glu Glu Met Glu Val Glu Glu Arg Pro			
520	525	530	
gca ggc tca act cca gcc acc ttc tcc acc tca ggc ata ggc ctg caa			2045
Ala Gly Ser Thr Pro Ala Thr Phe Ser Thr Ser Gly Ile Gly Leu Gln			
535	540	545	
acc cag gga aag cag gat ggg tga ggggggttag tccctgcctc accttgggga			2099
Thr Gln Gly Lys Gln Asp Gly *			
550	555		
tggaccttca gctgaaacca tatggccccc taggtgcaca gccttgattc ttcctggag			2159
cctacagagc aggcaggcta ggccaagcca ggctcaactt ctgggctccc agtgcacatt			2219
ggctgtgtat gacgggaggc agcagtgaga ggccttccta gttagggcca acagctgata			2279
ccaagcctct gaaatccagc aaggaggtct gcctcccacc agaccctctc cagtgtactt			2339
ccccagatag gaccagagga tgtctagttc taggctgagc tggcaggcag ctattacccc			2399
ggttctttcc ccacccagg tctgtctctt gccttttctt ggggcatata agctactgag			2459
tggaacatgg agctgatcaa gaggcgtaa tggatcatggc tgtttcccag acctgaatat			2519
tggggtgctt cttgccagta ttctaagaca tttgagtaat tgctgtttgc acttactgca			2579
tggtcagacc acgtcactac atttctatgc aaggggacag caaggcagcg tgggtggtcat			2639
ggctcttagc taacctatcc aaagaccttt tcctgttgat taatctatct tcatatttat			2699
aaaggagtct taatgttctg ccccataaga ctttcaacct tgtggttggg agtggggctg			2759
gtttttagtg ccttagggcc tgcttctatg tatttatcaa catgtgatac attcaattgg			2819
ttaaattggtt tatacaggga ctgatttget tcccttcctg ccatggctgg agctttggga			2879
acagtctgtc cttacagagc tgcaataaga aataacccaa gatgaagctg gtcaaattatt			2939
ttcataactt gcttctgttg attttttttt tgtaaaactt tcccaagaca ttttcagact			2999

3042

```
<220>  
<221> CDS  
<222> (402) .. (1985)
```

2518

Pro Trp Thr Val Arg Val Lys Leu Ala Tyr Asp Ile Ala Val Gly Leu	
135 140 145	
agc tac ctt cac ttc aaa ggc att ttt cat cgg gac ctc aca tct aag	893
Ser Tyr Leu His Phe Lys Gly Ile Phe His Arg Asp Leu Thr Ser Lys	
150 155 160	
aac tgc ctg ata aag agg gat gag aat ggt tac tct gca gtg gta gct	941
Asn Cys Leu Ile Lys Arg Asp Glu Asn Gly Tyr Ser Ala Val Val Ala	
165 170 175 180	
gac ttt ggc ctg gct gag aag atc ccc gat gtc agc atg ggg agt gag	989
Asp Phe Gly Leu Ala Glu Lys Ile Pro Asp Val Ser Met Gly Ser Glu	
185 190 195	
aag ctg gcc gtg gtg ggt tcc cca ttc tgg atg gca cct gag gtt ctc	1037
Lys Leu Ala Val Val Gly Ser Pro Phe Trp Met Ala Pro Glu Val Leu	
200 205 210	
cga gat gag ccc tat aat gaa aag aat ttc ggg ctg gac tat gat gct	1085
Arg Asp Glu Pro Tyr Asn Glu Lys Asn Phe Gly Leu Asp Tyr Asp Ala	
215 220 225	
ttc cag cac atg gtg gga gac tgt ccc cca gat ttt ctg caa ctt act	1133
Phe Gln His Met Val Gly Asp Cys Pro Pro Asp Phe Leu Gln Leu Thr	
230 235 240	
ttc aac tgc tgt aac atg gat ccc aaa ctg cgc cca tct ttt gtg gag	1181
Phe Asn Cys Cys Asn Met Asp Pro Lys Leu Arg Pro Ser Phe Val Glu	
245 250 255 260	
att ggg aag acc ctg gag gaa att ctg agc cgc cta cag gaa gaa gag	1229
Ile Gly Lys Thr Leu Glu Glu Ile Leu Ser Arg Leu Gln Glu Glu Glu	
265 270 275	
cag gag agg gat agg aag ctg cag ccc aca gcc agg gga ctc ttg gag	1277
Gln Glu Arg Asp Arg Lys Leu Gln Pro Thr Ala Arg Gly Leu Leu Glu	
280 285 290	
aaa gca cct ggg gtg aag cga cta agc tca ctg gat gac aag atc ccc	1325
Lys Ala Pro Gly Val Lys Arg Leu Ser Ser Leu Asp Asp Lys Ile Pro	
295 300 305	
cac aag tca cca tgc cca aga cgt acc atc tgg ctg tct cga agc cag	1373
His Lys Ser Pro Cys Pro Arg Arg Thr Ile Trp Leu Ser Arg Ser Gln	
310 315 320	
tca gat atc ttt tcc cgt aag ccc cca cgt aca gtg agt gtc ttg gac	1421
Ser Asp Ile Phe Ser Arg Lys Pro Pro Arg Thr Val Ser Val Leu Asp	
325 330 335 340	
cca tac tac cgg cca cga gat ggt gct gcc cgc acc ccc aaa gtc aac	1469
Pro Tyr Tyr Arg Pro Arg Asp Gly Ala Ala Arg Thr Pro Lys Val Asn	
345 350 355	
cct ttt agt gct cgc cag gac ctc atg ggg ggc aag atc aag ttt ttt	1517
Pro Phe Ser Ala Arg Gln Asp Leu Met Gly Gly Lys Ile Lys Phe Phe	
360 365 370	
gac ctg ccc agc aag tct gtc atc tct ctg gta ttt gac ctg gat gca	1565
Asp Leu Pro Ser Lys Ser Val Ile Ser Leu Val Phe Asp Leu Asp Ala	
375 380 385	
cca ggg ccc gga act atg ccc ctg gct gac tgg cag gag ccc ctg gcc	1613

Pro Gly Pro Gly Thr Met	Pro Leu Ala Asp Trp	Gln Glu Pro Leu Ala	
390	395	400	
cca cct att cgc cgg tgg	cgt tcc ttg cct ggt	tcg cct gag ttc ttg	1661
Pro Pro Ile Arg Arg Trp	Arg Ser Leu Pro Gly	Ser Pro Glu Phe Leu	
405	410	415 420	
cat caa gag gct tgt cca ttt gtg	ggc cgg gaa gaa tcg cta tct gat		1709
His Gln Glu Ala Cys Pro Phe Val	Gly Arg Glu Glu Ser Leu Ser Asp		
	425 430 435		
ggg ccc cca cca cgc cta agt agt	ctc aag tac aga gtt aaa gag atc		1757
Gly Pro Pro Pro Arg Leu Ser Ser	Leu Lys Tyr Arg Val Lys Glu Ile		
	440 445 450		
cca cca ttc cgg gca tct gcc cta	cca gct gct caa gcc cat gag gct		1805
Pro Pro Phe Arg Ala Ser Ala Leu	Pro Ala Ala Gln Ala His Glu Ala		
	455 460 465		
atg gac tgc tcc att ctc cag gaa	gaa aat ggt ttt ggg tcc agg ccc		1853
Met Asp Cys Ser Ile Leu Gln Glu	Asn Gly Phe Gly Ser Arg Pro		
	470 475 480		
cag ggg acc agt cca tgc cct gcg	ggt gct tct gag gag atg gag gta		1901
Gln Gly Thr Ser Pro Cys Pro Ala	Gly Ala Ser Glu Glu Met Glu Val		
	485 490 495 500		
gaa gaa agg cca gca ggc tca act	cca gcc acc ttc tcc acc tca ggc		1949
Glu Glu Arg Pro Ala Gly Ser Thr	Pro Ala Thr Phe Ser Thr Ser Gly		
	505 510 515		
ata ggc ctg caa acc cag gga aag	cag gat ggg tga gggg gtttagtccc		1999
Ile Gly Leu Gln Thr Gln Gly Lys	Gln Asp Gly *		
	520 525		
tgccctcacct tggggatgga ccttcagctg	aaacccatag gccccctagg tgcacagcct		2059
tgattcttcc ctggagccta cagagcaggc	aggctaggcc aagccaggct caacttctgg		2119
gctcccagtg cccattggct gtgtatgacg	ggaggcagca gtgagaggcc ttcctagtta		2179
gggccaacag ctgataccaa gcctctgaaa	tccagcaagg aggtctgcct cccaccagac		2239
cctctccagt gtacttcccc agataggacc	agaggatgtc tagttctagg ctgagctggc		2299
aggcagctat taccocgggt ctttccccac	cccaggctct tctcttgcct tttcttgggg		2359
catataagct actgagtgga acatggagct	gatcaagagg ccgtaatggt catggctggt		2419
tcccagacct gaatattggg gtgcttcttg	ccagtattct aagacatttg agtaattgct		2479
gtttgcactt actgcatggt cagaccacgt	cactacattt ctatgcaagg ggacagcaag		2539
gcagcgtggt ggtcatggct cttagctaac	ctattcaaag accttttcct gttgattaat		2599
ctattttcat atttataaag gagtcttaat	gttctgcccc ataagacttt caaccttggtg		2659
gttgggagtg gggctggttt tgtaggcct	agggcctgct tctatgtatt tatcaacatg		2719
tgatacatc aattggttaa atggtttata	cagggactga tttgcttccc ttcctgccat		2779
ggctggagct ttgggaacag tctgtcctta	cagagctgca ataagaaata accaaagatg		2839
aagctggtca aatattttca taacttgctt	ctgttgattt tttttttgta aaactttccc		2899

2521

agt gga tct tgt gcc act gtg tca cct gat cag gtc aaa aaa aaa aaa	633
Ser Gly Ser Cys Ala Thr Val Ser Pro Asp Gln Val Lys Lys Lys Lys	
180 185 190	
act gaa ggc aaa cgg act atc gtc cgg cag gga aag cag gtg gtg ttc	681
Thr Glu Gly Lys Arg Thr Ile Val Arg Gln Gly Lys Gln Val Val Phe	
195 200 205	
cga gat gag gac agc act ggc aat gat gag gac atc atg gtg gac tca	729
Arg Asp Glu Asp Ser Thr Gly Asn Asp Glu Asp Ile Met Val Asp Ser	
210 215 220 225	
gat gac gat tcc tgg gac ctc gtg acc tgc ttc tgc atg aag cca ttt	777
Asp Asp Asp Ser Trp Asp Leu Val Thr Cys Phe Cys Met Lys Pro Phe	
230 235 240	
gcc ggc cgc ccc atg atc gag tgt aat gag tgc cac acc tgg att cac	825
Ala Gly Arg Pro Met Ile Glu Cys Asn Glu Cys His Thr Trp Ile His	
245 250 255	
ctg tcc tgt gcg aaa atc cgg aaa tcc aat gtt cca gaa gtg ttt gtc	873
Leu Ser Cys Ala Lys Ile Arg Lys Ser Asn Val Pro Glu Val Phe Val	
260 265 270	
tgc caa aag tgc cgg gac tcc aag ttt gac atc cgc cgt tcc aac cgc	921
Cys Gln Lys Cys Arg Asp Ser Lys Phe Asp Ile Arg Arg Ser Asn Arg	
275 280 285	
tgc cgg acg ggc tcc cgg aag ctg ttc ctg gac tga ctgc tggctggcga	971
Ser Arg Thr Gly Ser Arg Lys Leu Phe Leu Asp *	
290 295 300	
ggaggctgcg agcgtggaat cggaagcgac cgcgggcttt tttgcccttc tcttagttga	1031
gcacagaacc ctcagctctg gtgcgggcag atccctgccca tttaggtgcc taagcaaaag	1091
gacaggctgt ccaaggtaga aactgtacat agccggtgac cgaatgcgac ctttgccagc	1151
cagagctgct gccagagctg cgttccctgc agtggaggtg gactggacac ccacgtgcag	1211
cgggtttggc tcatttgaaa atgagggctc gtggtagctg tgcgttttgc tatcattgct	1271
aagagattcc cgtgattgg gctcagtgcc agctgttatt ctgcttccac tgtgttgggg	1331
agaggtgttc ggtttcccca gcctgttaat gaacagccat acgtgtaagc tttttcttga	1391
gtgttaagtc ttttaccaaa agtgtctgta cagcagccat ccaagttgcc cctacttagt	1451
ggcttgccct ctgcctgcct cagctgctgc ctgaccggct gggggaggca ctggcgggag	1511
gcctcgggct cccctggaag ggcgctgggc tggcgggtca gctggtggtt cttaggtttc	1571
cttctgtttg ttaaaaggga caatgtggcc acttctctgt ggaaaggag ttggttgggg	1631
ggttgagatg gcccggtgtc ataactcagt ttctgtttt gcacgatgta aaaaccctgt	1691
ctttttgcac gatacagcca aaagtattgg ctgatttctt gctgagtgcc ctcttagttg	1751
gtgtgtgagg tcttggtggg ctcaggccag ctgtttgcga gtgtgggaac tcataggttc	1811
tgtctttgtc tcttcctttc acctcattct ggtagcagca taaagggttag gcaatcactg	1871
ggaccgcgat ggtgttcttc caaagaatag ggtaaaggag agctgggagg gagccctctc	1931

```

cgttgggtga ctcttgtgtg ccctttagac aggctggcct gccggtcca cagggtagacg 1991
ttaggacttg agtctttctt tttctgtttt gagtgggtga gtgagtata gggtaacatg 2051
ggccttcagg atgacccctt ggaactgtgc cgagttcctt aaatctcagc tgggatcctg 2111
gacctgggag gccctgtga gggccagctc tggaaaaacc tgggagttga tgccggaggc 2171
tgtggaagaa ctctgctga gggcaggggtg ccctggaaca ctggtagttc tggggctggg 2231
aggagagagg gctccggctt tctctgaaat gaacactgct cttcagcagt tcaagtactt 2291
gttctcaaaa catcttctaa ttgattggta ggttttcata agcattgttt ctttaaggca 2351
tggaaagggg agaatgctca agcaagtcac gtttggtttc agtgggatgg gcccgcgctc 2411
tcactgctgg gggcttcccc ttcagtgggc accttgtgac caggccacca ggcagactct 2471
tcccaccttc tccactgaa gcaccaaggg gcttgaaccg taatttggct aatcagaggc 2531
atcttttttg tctagtatc tttcacactt gtccaaccgt cttatttttt taaaagttct 2591
gttgcttgta ttaacacgaa actagagaga aatagtttct gaagccagtt tattgtgaag 2651
atccccaagg gggagggttg gtagagaaaa atagtaagct ggtttagaaa ctgacgaggg 2711
caaacagcca ggacgcattg gagaggaatt tgccaaagat ctaccctgag ataacgcctg 2771
tccagtgtct tcaccacgtg aataaccagc gctccaaagt gtttttctgc tttgaaaaaa 2831
aaaaattcca caagctttta aagggtgcatt taagaatcca tgtgacttta gaatggaact 2891
gccggccctg gcaactgtca cgtgtgctag aaggttcgat gcctctggaa tgcatgtgat 2951
actcatctcc attttgtttc cttgattgca tttttgttct tttagcagat ctgtccctgt 3011
gggtggtgtc taagaagtgc gacaccttgg tttttgtgtt agattgagct gggcagctgc 3071
aatcagcttc tttatatgca aattaggcac gacctatctg tggttcctgg ttggtggcta 3131
atgaagtgag gggagggagg gatgtcacc caaaagtagg ccctccatt ggctttggcc 3191
aggccagaca cttcacatcg tttacatggg tctgtgtaat tttaaagttt atgtgtataa 3251
agcgaagctg tttctgtgaa actgtatatt ttgtaaataa atatattgct actttgaggt 3311
tcattgattca aggttcaggc gattgcgttc tgtgtgaag ga 3353

```

<210> 913
 <211> 7838
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (673) .. (2616)

```

<400> 913
tgaatgagtc tcatcctgca cttgcagaat ggtgcagttt gggcagatat agtcttcccc 60
attcctttcc aaaagcctcc ctgcagcctc agaaatgcc acacaatgc catgaaacca 120

```

ttctttcacag	cggtcacagc	aaatcataaa	cctgttggtg	tgaggctggc	ggcaaattgca	180
atacagggcg	ttggggtcgt	accctcacat	tcaggcttcg	tattttcaac	aactcagatt	240
atctagaggc	tgttcccg	gagtaagctc	cttcgcctcc	gactcagtgt	agacgtcgcc	300
atcccgggttc	cagattttccg	cgctccaacg	cctccgcagc	agccatcttg	ccagaggggcc	360
gacgcccttt	tgactctggc	gccaaaccgt	agtgcgtggt	cgccgcgagg	ggagttctgc	420
gcaagtacgg	aagctgaggt	tccgcgcttc	cgggagaccg	tccgctccgc	cccctcgcg	480
gggcgcttca	ttggtcacg	gctcgcgctc	tcgcgctctc	ttgctgtcgc	gagagcccag	540
gagaggctgc	ggagccgcag	ccgcccagac	cgcgcagcgc	gggaggcagg	ttccgcacgt	600
gggaggcagc	ccaagcgcac	tgagcgcgtg	gagcagttcc	tgaccattgc	gcggcgccgc	660
ggcaggagga	gc	atg cct gtc tcc	ctg gag gat tct	ggg gag ccc acg		708
		Met Pro Val Ser	Leu Glu Asp Ser	Gly Glu Pro Thr		
		1	5	10		
tcc tgc ccc gcc	aca gac gcc	gag aca gcc	tcc gag ggc	agc gtg gaa		756
Ser Cys Pro Ala	Thr Asp Ala	Glu Thr Ala	Ser Glu Gly	Ser Val Glu		
	15	20	25			
agc gct tct gag	acc aga agc	ggc ccc cag	tct gct tcc	aca gct gtg		804
Ser Ala Ser Glu	Thr Arg Ser	Gly Pro Gln	Ser Ala Ser	Thr Ala Val		
	30	35	40			
aag gaa cga cca	gcc tct tct	gaa aag gtg	aaa gga ggg	gat gac cac		852
Lys Glu Arg Pro	Ala Ser Ser	Glu Lys Val	Lys Gly Gly	Asp Asp His		
	45	50	55	60		
gat gac acc tcc	gat agt gac	agc gat ggc	ctg acc ttg	aaa gag ctt		900
Asp Asp Thr Ser	Asp Ser Asp	Ser Asp Ser	Gly Leu Thr	Leu Lys Glu	Leu	
	65	70	75			
cag aat cgc ctt	cgc agg aag	cgg gaa cag	gag ccc act	gag agg ccc		948
Gln Asn Arg Leu	Arg Arg Lys	Arg Glu Gln	Glu Pro Thr	Glu Arg Pro		
	80	85	90			
ctg aaa ggg atc	cag agt cgc	ctg cgg aag	aag cgc cgg	gag gag ggt		996
Leu Lys Gly Ile	Gln Ser Arg	Leu Arg Lys	Lys Lys Arg	Glu Glu Gly		
	95	100	105			
ccc gcc gag act	gtg ggc tcc	gag gcc agt	gac act gtg	gag ggc gtc		1044
Pro Ala Glu Thr	Val Gly Ser	Glu Ala Ser	Asp Thr Val	Glu Gly Val		
	110	115	120			
ctg ccc agt aag	cag gag ccc	gag aac gat	cag ggg gtt	gtg tcc cag		1092
Leu Pro Ser Lys	Gln Glu Pro	Glu Asn Asp	Gln Gly Val	Val Ser Gln		
	125	130	135	140		
gct ggg aaa gat	gac aga gag	agt aag ttg	gag gga aag	gcg gct cag		1140
Ala Gly Lys Asp	Asp Arg Glu	Ser Lys Leu	Glu Gly Lys	Ala Ala Gln		
	145	150	155			
gac atc aaa gat	gag gag cct	gga gac ttg	ggc cga ccg	aag cct gaa		1188
Asp Ile Lys Asp	Glu Glu Pro	Gly Asp Leu	Gly Arg Pro	Lys Pro Glu		
	160	165	170			
tgt gag ggt tac	gac ccc aac	gcc ctg tat	tgc att tgc	cgc cag cct		1236

Cys	Glu	Gly	Tyr	Asp	Pro	Asn	Ala	Leu	Tyr	Cys	Ile	Cys	Arg	Gln	Pro		
		175					180					185					
cac	aac	aac	agg	ttt	atg	att	tgc	tgt	gac	cgc	tgt	gaa	gaa	tggt	ttt	1284	
His	Asn	Asn	Arg	Phe	Met	Ile	Cys	Cys	Asp	Arg	Cys	Glu	Glu	Trp	Phe		
		190				195					200						
cat	ggc	gat	tgt	gtg	ggc	att	tct	gag	gct	cga	ggg	agg	ctt	ttg	gaa	1332	
His	Gly	Asp	Cys	Val	Gly	Ile	Ser	Glu	Ala	Arg	Gly	Arg	Leu	Leu	Glu		
		205			210					215				220			
agg	aat	ggg	gaa	gac	tat	atc	tgc	cca	aac	tgc	acc	att	ctg	caa	gtg	1380	
Arg	Asn	Gly	Glu	Asp	Tyr	Ile	Cys	Pro	Asn	Cys	Thr	Ile	Leu	Gln	Val		
				225				230					235				
cag	gat	gag	act	cat	tca	gaa	acg	gca	gat	cag	cag	gaa	gct	aaa	tggt	1428	
Gln	Asp	Glu	Thr	His	Ser	Glu	Thr	Ala	Asp	Gln	Gln	Glu	Ala	Lys	Trp		
			240					245					250				
aga	cct	gga	gat	gct	gat	ggc	acc	gat	tgt	aca	agt	ata	gga	aca	ata	1476	
Arg	Pro	Gly	Asp	Ala	Asp	Gly	Thr	Asp	Cys	Thr	Ser	Ile	Gly	Thr	Ile		
		255				260						265					
gag	cag	aag	tct	agc	gaa	gac	caa	ggg	ata	aag	ggg	aga	att	gag	aaa	1524	
Glu	Gln	Lys	Ser	Ser	Glu	Asp	Gln	Gly	Ile	Lys	Gly	Arg	Ile	Glu	Lys		
		270				275					280						
gct	gca	aat	cca	agt	ggc	aag	aag	aaa	ctc	aag	atc	ttc	cag	cct	gggt	1572	
Ala	Ala	Asn	Pro	Ser	Gly	Lys	Lys	Lys	Leu	Lys	Ile	Phe	Gln	Pro	Gly		
		285			290				295					300			
ccc	ggg	cct	gtc	ccc	acc	cag	ctg	cct	gtc	ctc	tggt	cag	gta	ttg	gaa	1620	
Pro	Gly	Pro	Val	Pro	Thr	Gln	Leu	Pro	Val	Leu	Trp	Gln	Val	Leu	Glu		
				305				310						315			
att	gct	gtg	tct	aga	agc	atc	tct	gcc	ttc	aca	ctc	ttg	cac	tgc	att	1668	
Ile	Ala	Val	Ser	Arg	Ser	Ile	Ser	Ala	Phe	Thr	Leu	Leu	His	Cys	Ile		
			320					325					330				
agc	tgc	aag	gtg	ata	gag	gcg	cct	gggt	gcc	tca	aaa	tgt	att	ggc	ccc	1716	
Ser	Cys	Lys	Val	Ile	Glu	Ala	Pro	Gly	Ala	Ser	Lys	Cys	Ile	Gly	Pro		
		335				340					345						
ggg	tgc	tgt	cac	gtg	gcg	cag	ccc	gac	tcg	gtg	tac	tgc	agt	aat	gac	1764	
Gly	Cys	Cys	His	Val	Ala	Gln	Pro	Asp	Ser	Val	Tyr	Cys	Ser	Asn	Asp		
		350				355					360						
tgt	atc	ctc	aaa	cac	gcc	gca	gcg	aca	atg	aag	ttt	cta	agc	tca	gggt	1812	
Cys	Ile	Leu	Lys	His	Ala	Ala	Ala	Thr	Met	Lys	Phe	Leu	Ser	Ser	Gly		
		365			370				375					380			
aaa	gaa	cag	aag	cca	aag	cct	aaa	gaa	aag	atg	aag	atg	aag	cca	gag	1860	
Lys	Glu	Gln	Lys	Pro	Lys	Pro	Lys	Glu	Lys	Met	Lys	Met	Lys	Pro	Glu		
			385					390						395			
aag	ccc	agt	ctt	ccg	aaa	tgc	gggt	gct	cag	gca	gggt	att	aaa	atc	tct	1908	
Lys	Pro	Ser	Leu	Pro	Lys	Cys	Gly	Ala	Gln	Ala	Gly	Ile	Lys	Ile	Ser		
			400				405					410					
tct	gtg	cac	aag	aga	cca	gct	cca	gaa	aaa	aaa	gag	acc	aca	gtg	aag	1956	
Ser	Val	His	Lys	Arg	Pro	Ala	Pro	Glu	Lys	Lys	Glu	Thr	Thr	Val	Lys		
		415				420					425						
aag	gca	gtg	gtg	gtc	cct	gcg	cgg	agt	gaa	gca	ctc	ggg	aag	gaa	gca	2004	

Lys	Ala	Val	Val	Val	Pro	Ala	Arg	Ser	Glu	Ala	Leu	Gly	Lys	Glu	Ala		
430						435					440						
gct	tgt	gag	agc	agc	acg	ccg	tcg	tgg	gcg	agc	gat	cac	aat	tac	aat	2052	
Ala	Cys	Glu	Ser	Ser	Thr	Pro	Ser	Trp	Ala	Ser	Asp	His	Asn	Tyr	Asn		
445					450					455					460		
gca	gta	aag	cca	gaa	aag	act	gct	gct	ccc	tcg	ccg	tca	ctg	ttg	tat	2100	
Ala	Val	Lys	Pro	Glu	Lys	Thr	Ala	Ala	Pro	Ser	Pro	Ser	Leu	Leu	Tyr		
				465					470					475			
aaa	tcc	acg	aag	gaa	gac	agg	agg	tcc	gag	gag	aaa	gcg	gca	gcc	acg	2148	
Lys	Ser	Thr	Lys	Glu	Asp	Arg	Arg	Ser	Glu	Glu	Lys	Ala	Ala	Ala	Thr		
			480					485						490			
gca	gcc	tca	aag	aaa	aca	gcc	cct	cca	ggc	tcc	acg	gtg	ggc	aag	cag	2196	
Ala	Ala	Ser	Lys	Lys	Thr	Ala	Pro	Pro	Gly	Ser	Thr	Val	Gly	Lys	Gln		
			495				500						505				
cct	gca	cct	aga	aac	ctc	gtg	cca	aag	aag	tct	tct	ttt	gct	aat	gtg	2244	
Pro	Ala	Pro	Arg	Asn	Leu	Val	Pro	Lys	Lys	Ser	Ser	Phe	Ala	Asn	Val		
			510				515						520				
gca	gca	gcc	aca	cca	gcc	att	aaa	aag	cca	ccc	tca	ggt	ttc	aag	ggc	2292	
Ala	Ala	Ala	Thr	Pro	Ala	Ile	Lys	Lys	Pro	Pro	Ser	Gly	Phe	Lys	Gly		
525					530					535					540		
acc	atc	ccc	aag	agg	cca	tgg	ctc	tcc	gct	acc	cca	tcg	agt	ggt	gct	2340	
Thr	Ile	Pro	Lys	Arg	Pro	Trp	Leu	Ser	Ala	Thr	Pro	Ser	Ser	Gly	Ala		
				545					550					555			
tca	gct	gcc	agg	cag	gcc	gga	ccg	gca	cct	gca	gcg	gcg	acg	gct	gcc	2388	
Ser	Ala	Ala	Arg	Gln	Ala	Gly	Pro	Ala	Pro	Ala	Ala	Ala	Thr	Ala	Ala		
				560				565						570			
tcc	aag	aag	ttc	cct	ggc	tcc	gct	gct	ttg	gtg	gga	gcc	gta	agg	aag	2436	
Ser	Lys	Lys	Phe	Pro	Gly	Ser	Ala	Ala	Leu	Val	Gly	Ala	Val	Arg	Lys		
			575					580					585				
cca	gtg	gta	cct	tct	gtt	cca	atg	gcc	tcg	cca	gcc	cca	gga	cgc	ctt	2484	
Pro	Val	Val	Pro	Ser	Val	Pro	Met	Ala	Ser	Pro	Ala	Pro	Gly	Arg	Leu		
			590				595					600					
ggg	gct	atg	agt	gct	gca	cca	tcg	cag	cca	aat	tca	caa	att	cgg	caa	2532	
Gly	Ala	Met	Ser	Ala	Ala	Pro	Ser	Gln	Pro	Asn	Ser	Gln	Ile	Arg	Gln		
605					610					615					620		
aat	atc	aga	cgc	tcc	tta	aaa	gag	att	ttg	tgg	aaa	agt	tcc	ttt	ttt	2580	
Asn	Ile	Arg	Arg	Ser	Leu	Lys	Glu	Ile	Leu	Trp	Lys	Ser	Ser	Phe	Phe		
				625					630					635			
tta	ttc	tgt	tca	gag	tca	atg	aca	gcg	atg	act	taa	tcat	gacagaaaac			2630	
Leu	Phe	Cys	Ser	Glu	Ser	Met	Thr	Ala	Met	Thr	*						
				640					645								
gaagtaggaa	aaattgcct	ccatattgag	aaggagatgt	ttaacttggt	tcaagttaca											2690	
gataatcgct	acaagagtaa	atatcgagc	atcatgttca	acctgaagga	ccctaaaaat											2750	
cagggactct	tccatcggtg	tctgcgtgag	gaaatctctt	tggcgaaact	tgtgagactg											2810	
aagccagaag	aacttgatc	ttaaagagctt	tccacgtgga	aagagaggcc	agcgagatct											2870	
gtgatggagt	ccagaactaa	actgcacaat	gaaagcaaga	agacggcccc	caggcaggag											2930	

gccatccccg atctggagga ctctccgcca gtgtcggatt cagaggaaca gcaagagtca 2990
gcacgtgctg tccctgagaa gagcacagcg ccgcttctcg acgtcttcag cagcatgttg 3050
aaagacacca ccagtcagca ccgcgcacac ctcttcgata tcaactgtaa aatttgca 3110
ggccagggtc cctccgcaga agatgagcca gctccgaaaa aacaaaaatt gtcagcttct 3170
gttaagaaag aagacttaaa atcaaagcat gacagctctg cacctgaccc agctccggat 3230
tcagctgatg aggtgatgcc ggaggctgtg cctgaagttg cctctgagcc aggcctagaa 3290
agtgttctc atccaaatgt ggacagaacg tatttccctg ggctccagg agatggccat 3350
cccgagccct ccccgctgga agacctgtcc cctgcccag cctcctgtgg gagcgggggtg 3410
gtcaccaccg tcacagtgtc cggccgggac ccaggaccg ctccaagcag ttcatgcaca 3470
gccgtggcct ccgcagcatc ccgccagac agcaccacaca tggtggaagc cagacaggat 3530
gtgccgaagc ctgtcttgac ttctgtgatg gtgcccaagt ccatactagc taagccatcc 3590
tcctctctcg acccaagata cctgtcagtt cctccgtcac caaatatcag cacttcagaa 3650
tcacgttccc ctccagaggg agacacgacc ctctttttgt ctgactcag caccatttgg 3710
aaaggattta ttaacatgca gagtgtggca aaatttgtca ctaaggcgta tcctgtctct 3770
gggtgttttg attacctcag tgaggatttg cctgacacaa ttcacattgg tgggaggatc 3830
gcaccgaaga cagtttggga ttatgttggc aaactcaagt cttctgtgtc taaggagctc 3890
tgtctgatcc gcttccaccc cgccacagag gaagaggagg tcgcctatat ctctctctac 3950
tcctatttca gcagccgtgg ccgctttggg gttgtagcta ataacaacag gcacgtcaag 4010
gacctotacc tgatcccgct gagcgcccag gacctgttc catccaaact cttgcccttt 4070
gagggaccag gtaagcgccg gctttctggg tggaggtgag gccacctgc acctgcaccc 4130
ctcctccac tgacatgcc tgctgagtc tgaccagccc agggctctct gggagcagga 4190
gttaggagca cagacgcagc ggtagcaat aggttcac tttgagggcg taggactgtg 4250
gcacgagaag taccctgat tcacagcata aattgtctta ggagagtttt ttagagaggg 4310
aaaaaccac agcctgcaac cagctcatct tggcctcagg tcagagaaga ctcagtgcc 4370
aggagcccaa ggctcagcca gaaagggagg tgacactccc agcggccctg ctctttcctc 4430
tagacagact cgggagccag cacacaccg gaagtggctc catcagggat cacttctcta 4490
acagggatgg atttccagga gacttaacaa taatgacata gaaaactatt tctagaaata 4550
attattttta aatctgcagc tcaaattgta atagttcatt catctttggc aagctatttt 4610
gtgtttgcac gttccttggg aagtactgta tttaaacgat tatttacaaa tagcctaaaa 4670
tacatctttg tcaagggttg aggtgatcc caggggccac gtgctctgtt agtgaccagc 4730
tctttcatag ccccttagaa gaagctgatg tgacttcagt taggggttag tatctgatgc 4790
ccaactgaag tgtctccgtg gccatgcagt cccagagga ttggtgttct ctcaaagcg 4850

gtgtgtggat cacacagtgt cctctaaagt gcttcgtcat aaaggcaggt gctgtctgga 4910
ccctgtgcct cagtgccttc tgtccctgtc accaggcctc ggcgggtgtt cctgccatag 4970
ctgtgcaggg tgttcccacc cacaccctc atgccgcacc ctagctagct ggggtcctgt 5030
aggggccact ccacatcttg ggcgggactt ctgtcgcccc aggcacagcc cacgttccta 5090
ctggagccca ttcttcacag ctggagtggg ctgagcctat gctgtgttg tgggaattata 5150
tgtccataaa gggattggtt ggtatcagta atttcaggg taaatatttg ctggcgtgg 5210
gcattaaatt attttagtgc cagataaatt tttaaaagca aagtgcctta gtgtgtcccc 5270
tcaaatacta cttgggataa agagatgcca cctaattggg ggcagaaagg accctggtag 5330
aggttcttgg tgttgcttgt gaagagctct gccagctcc acgtgaccag ggagaggaaa 5390
agcccgcccc tcctggaggt gaagaccgag aagctggcct ctccgcacct gtgaagacct 5450
actggtcagt tgcaagtgcg acagtgtgtg cactcagtgc agacactgca gcacctcagc 5510
acctccctac cggggtggaa agagcacttt ttctttacag aaacatgatt cttagatagc 5570
gagcctcccc tttttaaaac aattgaagcg atatttcac ctttcttgag cttctctccc 5630
tgctcatctc caaacttggg gctgtcaggt gagcacaggt ttagagggtg tgagcgagcc 5690
ccggcgcatg ccgggcaccg gggttcccca cacttgggca gtgacggggc ccaggagggc 5750
caccagagga gcggcgctc cattctcccc acagcaaggg ctggctgtgc aggtgcagcc 5810
ccggggcaga gggaaaggac aggtctccca gcacctcccg gatggcaccg ggacaaggag 5870
ggctgggctg gggtcactca ccttgtctgc tgagtgcgat ggcaccaacc acccactg 5930
tcagctccgc gaccagctgg gggaacgtca cactcgcca ccaaggcact tgctgaggcc 5990
acgacgccgc ctgacgggga cacacaaaag cccagggac tttgatccac gataaagagc 6050
agaggcgtct gggtaaagta acacagggca agggacttta gaaaagtaac agctagtga 6110
acctttccat acacttcaga aatgttttaa cttaagactt cagtataatg ttaacttctc 6170
ctgatgtcct tgttgacatg aatgcgtgtg cgtgaaatct cacacacttc catggtcact 6230
aaacagcctt cccccgggc caggccatcg ggtactcggc ccgcttcacg tactgattac 6290
ttgacttggc gttttctaga tataaacatg tacatgtgtg tcctggcttt gtggtgtaaa 6350
tgtgtagtgc gtgtgcatgt gcgcgcgtgt gtgtgtgtaa ggctaggctc tggcatgttt 6410
cccctgtctc agcggacctt gtcctcacgg agatagccca gaagcccttg gacagcacag 6470
gccacacctg aggggtgctga tgggtgtgac tccacagagc tgtggtcagg ggtgagcgtg 6530
tgctgcgcag cttggagtca cgcgccaga agtgcgtggg gaggtctgc aggaccagc 6590
tccattccac agcctcagtt ctctcgggca catgcagcac aggcctgaag gagacctggc 6650
gccccagcct tgagctgccc gtctgcatca gggcactgat gtgggagcat cttccctgg 6710
ggatgttaag gagaaggctc tgttgggggt agagattcac gcagaaaaga gtgactgact 6770

```

cgcccggtgtg cctcagttta taccacacaa ttgcaggtgt ccatgcctcc cacacatggg 6830
gacctagtgg gttttgacag cgtgggtgtcc agtcctagcc ccctcagtgc ttgctgttca 6890
cacttaagca agtgaaggcc tgaagggtgcc cagctgtgcc ctcaggggaa acttaagtca 6950
cccgccctgt cagcacttgg cccttgtcgg gcagtgtgag tggagctgcc ccgcagcac 7010
cctcaggagc catgcagttc acagcagtag ctggatctcc ctgaggacat ttgtccttgc 7070
atatcttaat gatttgtcca cagaaacacc ggggtgtctt cctctgcccc tctgccccgc 7130
agtgggggca ctctctgtaa ctcagcatca cgggtggggg cagctgggag gcctgggtcc 7190
aggtagacct ctccacctag atgttcaccc cactcagttc cagctttacc aacaggggccc 7250
ccgcagggga cttgggggtcg cagagtcctg gcctgtctca gggccttggt catggaaggg 7310
agatgagtca ggttgaaagc tcatcgtgta ggggtctgtg cggggccctt acaggactgg 7370
accgcagcca agatgcctgc ctgttaacca tgcccagccc ccgtcatttc cgcgtgaagc 7430
cgcaggcctc ggagccttgg tctgaaatgc ctgtggagta acctcgggtcc ataaacatgg 7490
gtgcacagtc tgttctcccc aagtacaggg caggaggaaa caccgcctc tgtagctgct 7550
cgaatggaaa gggctctttt ctctgaggtc ttatacatt agaaagctct tctgggaaga 7610
atgtttgaat ccatagtgtc tttctgtatt cacttttaat tgctttctaa attagctgag 7670
aaattctgac ttgaaatatt gtcaggtaa catttcttca gttttcatgt gtgtatgtaa 7730
cagtagcttt gcatggaaat tgtaatcaga gtcaaataca gtattgaatg gaatgtactg 7790
ccttctctc ctaaatcaat aaacatcttt catggaaaaa aaaaaaaaa 7838

```

```

<210> 914
<211> 3484
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> CDS
<222> (131)..(3178)

```

```

<400> 914
cgcccagcag ccggtgggca ggcgcggcgg agcagagcggg gccggcggcg ggcgccgagg 60
gacgccgagg cctcgggcgg gggctggccc ggggttccag gtctccagtg ggggctgcag 120
actaagcaaa atg agg cgg ttc ctg agg cca ggg cat gac cct gtg cgg 169
Met Arg Arg Phe Leu Arg Pro Gly His Asp Pro Val Arg
1 5 10
gag agg ctc aag cgg gac ctg ttc cag ttt aac aag acg gtg gag cat 217
Glu Arg Leu Lys Arg Asp Leu Phe Gln Phe Asn Lys Thr Val Glu His
15 20 25
ggc ttc ccg cac cag ccc agc gcc ctc ggc tac agc ccg tcc ctg cgc 265
Gly Phe Pro His Gln Pro Ser Ala Leu Gly Tyr Ser Pro Ser Leu Arg

```

30	35	40	45	
atc ctg gcc atc ggc acc cgt tct gga gcc atc aag ctc tac gga gcc				313
Ile Leu Ala Ile Gly Thr Arg Ser Gly Ala Ile Lys Leu Tyr Gly Ala	50	55	60	
cca ggc gtg gag ttc atg ggg ctg cac cag gag aac aac gct gtg acg				361
Pro Gly Val Glu Phe Met Gly Leu His Gln Glu Asn Asn Ala Val Thr	65	70	75	
cag atc cac ctc ctg ccc ggc cag tgc cag ctg gtc acc ctg ctg gat				409
Gln Ile His Leu Leu Pro Gly Gln Cys Gln Leu Val Thr Leu Leu Asp	80	85	90	
gac aac agc ctg cac ctt tgg agc ctg aag gtc aag ggc ggg gca tcg				457
Asp Asn Ser Leu His Leu Trp Ser Leu Lys Val Lys Gly Gly Ala Ser	95	100	105	
gag ctg cag gag gat gag agc ttc aca ctg cgt gga ccc cca ggg gct				505
Glu Leu Gln Glu Asp Glu Ser Phe Thr Leu Arg Gly Pro Pro Gly Ala	110	115	120	125
gcc ccc agt gcc aca cag atc acc gtg gtc ctg cca cat tcc tcc tgc				553
Ala Pro Ser Ala Thr Gln Ile Thr Val Val Leu Pro His Ser Ser Cys	130	135	140	
gag ctg ctc tac ctg ggc acc gag agt ggc aac gtg ttt gtg gtg cag				601
Glu Leu Leu Tyr Leu Gly Thr Glu Ser Gly Asn Val Phe Val Val Gln	145	150	155	
ctg cca gct ttt cgt gcg ctg gag gac cgg acc atc agc tcg gac gcg				649
Leu Pro Ala Phe Arg Ala Leu Glu Asp Arg Thr Ile Ser Ser Asp Ala	160	165	170	
gtg ctg cag cgg ttg cca gag gag gcc cgc cac cgg cgt gtg ttc gag				697
Val Leu Gln Arg Leu Pro Glu Glu Ala Arg His Arg Arg Val Phe Glu	175	180	185	
atg gtg gag gca ctg cag gag cac cct cga gac ccc aac cag atc ctg				745
Met Val Glu Ala Leu Gln Glu His Pro Arg Asp Pro Asn Gln Ile Leu	190	195	200	205
atc ggc tac agc cga ggc ctc gtt gtc atc tgg gac cta cag ggc agc				793
Ile Gly Tyr Ser Arg Gly Leu Val Val Ile Trp Asp Leu Gln Gly Ser	210	215	220	
cgc gtg ctc tac cac ttc ctc agc agc cag caa ctg gag aac atc tgg				841
Arg Val Leu Tyr His Phe Leu Ser Ser Gln Gln Leu Glu Asn Ile Trp	225	230	235	
tgg cag cgg gac ggc cgc ctg ctc gtc agc tgt cac tct gac ggc agc				889
Trp Gln Arg Asp Gly Arg Leu Leu Val Ser Cys His Ser Asp Gly Ser	240	245	250	
tac tgc cag tgg ccc gtg tcc agc gaa gcc cag caa cca gag ccc ctc				937
Tyr Cys Gln Trp Pro Val Ser Ser Glu Ala Gln Gln Pro Glu Pro Leu	255	260	265	
cgc agc ctc gtg cct tac ggt ccc ttt cct tgc aaa gcg att acc aga				985
Arg Ser Leu Val Pro Tyr Gly Pro Phe Pro Cys Lys Ala Ile Thr Arg	270	275	280	285
atc ctc tgg ctg acc act agg cag ggg ttg ccc ttc acc atc ttc cag				1033
Ile Leu Trp Leu Thr Thr Arg Gln Gly Leu Pro Phe Thr Ile Phe Gln				

2531

545	550	555	
tgg aag ggg cac gag cgc ctg gca gcc cgc tca ggg ccc gtg cgc ttt Trp Lys Gly His Glu Arg Leu Ala Ala Arg Ser Gly Pro Val Arg Phe 560 565 570			1849
gag cct ggc ttt cag ccc ttc gtg ttg gtg cag tgt cag ccc ccg gct Glu Pro Gly Phe Gln Pro Phe Val Leu Val Gln Cys Gln Pro Pro Ala 575 580 585			1897
gtg gtc acc tcc ttg gcc ctg cac tct gag tgg cgg ctc gtg gcc ttc Val Val Thr Ser Leu Ala Leu His Ser Glu Trp Arg Leu Val Ala Phe 590 595 600 605			1945
ggc acc agc cat ggc ttt ggc ctc ttt gac cac cag cag cgg cgg cag Gly Thr Ser His Gly Phe Gly Leu Phe Asp His Gln Gln Arg Arg Gln 610 615 620			1993
gtc ttt gtt aag tgc aca ctg cac ccc agt gac cag ctg gcc ttg gag Val Phe Val Lys Cys Thr Leu His Pro Ser Asp Gln Leu Ala Leu Glu 625 630 635			2041
ggc cca ctc tcc cgc gtc aag tcc ctc aag aag tcc ttg cgt cag tca Gly Pro Leu Ser Arg Val Lys Ser Leu Lys Lys Ser Leu Arg Gln Ser 640 645 650			2089
ttc cgc cgg atg cgt cgg agc cgg gtg tcc agc cgg aag cgg cac ccg Phe Arg Arg Met Arg Arg Ser Arg Val Ser Ser Arg Lys Arg His Pro 655 660 665			2137
gct ggc ccc cca gga gag gca cag gag ggg agt gcc aag gct gag cgg Ala Gly Pro Pro Gly Glu Ala Gln Glu Gly Ser Ala Lys Ala Glu Arg 670 675 680 685			2185
cca ggc ctc cag aac atg gag ctg gcg cct gtg cag cgc aag atc gag Pro Gly Leu Gln Asn Met Glu Leu Ala Pro Val Gln Arg Lys Ile Glu 690 695 700			2233
gct cgc tcg gca gag gac tcc ttc aca ggc ttc gtc cgg acc ctg tac Ala Arg Ser Ala Glu Asp Ser Phe Thr Gly Phe Val Arg Thr Leu Tyr 705 710 715			2281
ttt gct gac acc tac ctg aag gac agc tcc cgg cac tgc ccc tcg ctg Phe Ala Asp Thr Tyr Leu Lys Asp Ser Ser Arg His Cys Pro Ser Leu 720 725 730			2329
tgg gct ggc acc aat ggg ggc acc atc tat gcc ttc tcc ctg cgt gtg Trp Ala Gly Thr Asn Gly Gly Thr Ile Tyr Ala Phe Ser Leu Arg Val 735 740 745			2377
cct ccc gcc gag cgg aga atg gat gag cct gtg cgg gca gag cag gcc Pro Pro Ala Glu Arg Arg Met Asp Glu Pro Val Arg Ala Glu Gln Ala 750 755 760 765			2425
aag gag atc cag ctg atg cac cgg gcg ccg gtg gtg ggc atc ctg gtg Lys Glu Ile Gln Leu Met His Arg Ala Pro Val Val Gly Ile Leu Val 770 775 780			2473
ctc gac gga cac agc gta ccc ctt ccc gag ccc ctc gaa gtg gcc cat Leu Asp Gly His Ser Val Pro Leu Pro Glu Pro Leu Glu Val Ala His 785 790 795			2521
gat ctg tcg aag agc cct gac atg cag gga agc cac cag ctg ctc gtc Asp Leu Ser Lys Ser Pro Asp Met Gln Gly Ser His Gln Leu Leu Val 800 805 810 815			2569

800	805	810	
gta tca gag gag cag ttc aag gtg ttc acg ctg ccc aag gtg agt gcc Val Ser Glu Glu Gln Phe Lys Val Phe Thr Leu Pro Lys Val Ser Ala 815 820 825			2617
aag ctg aag ttg aag ctg acg gcc ctg gag ggc tca aga gtg cgg cgg Lys Leu Lys Leu Lys Leu Thr Ala Leu Glu Gly Ser Arg Val Arg Arg 830 835 840 845			2665
gtc agc gtg gcc cac ttc ggc agt cgt cga gcc gag gac tac ggg gag Val Ser Val Ala His Phe Gly Ser Arg Arg Ala Glu Asp Tyr Gly Glu 850 855 860			2713
cac cac ctg gca gtc ctt acc aac ctg ggc gac atc cag gtg gtc tgc His His Leu Ala Val Leu Thr Asn Leu Gly Asp Ile Gln Val Val Ser 865 870 875			2761
ctg ccc ctg ctc aag ccc cag gtg cgc tac agc tgc atc cgc cgg gag Leu Pro Leu Leu Lys Pro Gln Val Arg Tyr Ser Cys Ile Arg Arg Glu 880 885 890			2809
gac gtc agt ggc atc gcc tcc tgc gtc ttc acc aaa tat ggc caa ggc Asp Val Ser Gly Ile Ala Ser Cys Val Phe Thr Lys Tyr Gly Gln Gly 895 900 905			2857
ttc tac ctg atc tca ccc tgc gag ttt gag cgc ttc tct ctc tcc acc Phe Tyr Leu Ile Ser Pro Ser Glu Phe Glu Arg Phe Ser Leu Ser Thr 910 915 920 925			2905
aag tgg ctg gtg gag ccc cgg tgt ctg gtg gat tca gca gaa acc aag Lys Trp Leu Val Glu Pro Arg Cys Leu Val Asp Ser Ala Glu Thr Lys 930 935 940			2953
aac cac cgc cct ggt aac ggt gcg ggc ccc aag aag gcc ccg agc cga Asn His Arg Pro Gly Asn Gly Ala Gly Pro Lys Lys Ala Pro Ser Arg 945 950 955			3001
gcc agg aac tca ggg act cag agt gat ggc gag gag aag cag ccc ggc Ala Arg Asn Ser Gly Thr Gln Ser Asp Gly Glu Glu Lys Gln Pro Gly 960 965 970			3049
ctg gtg atg gag cgc gct ctg ctc agt gat gag aga gcg gca act ggc Leu Val Met Glu Arg Ala Leu Leu Ser Asp Glu Arg Ala Ala Thr Gly 975 980 985			3097
gtt cac atc gag ccg ccg tgg ggt gca gcc tca gca atg gcg gag cag Val His Ile Glu Pro Pro Trp Gly Ala Ala Ser Ala Met Ala Glu Gln 990 995 1000 1005			3145
agt gag tgg ctg agc gtc cag gct gcg cga tga gcacacac tactactgat Ser Glu Trp Leu Ser Val Gln Ala Ala Arg * 1010 1015			3196
ggccttttcgg gggtccctgc cccaaccgga gaggccggtg cacagggccc cgccaggggc			3256
tgggggcac cccggttcca caatgcagct gctctgggcc tcgggagagg agagacccca			3316
gtcccttggg ctgcccttcc cgggcctcgt ctgtctgggt cctttggtca atgttgaca			3376
gtttttattg ctcccatccc tttttgtagt gggctggggt ttaagttata aatgttaact			3436
gcctctgggt gaaaaagttt ttaataaaca cctattacct cttgaaaa			3484

<210> 915
 <211> 3274
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (131)..(2968)

```

<400> 915
cgcccagcag cccgtgggca ggcgcggcgg agcgagcggg gccggcggcg ggcgccgagg      60
gacgccgagg cctcgggcgg gggctggccc ggggttccag gtctccagtg ggggctgcag      120

actaagcaaa  atg agg cgg ttc ctg agg cca ggg cat gac cct gtg cgg      169
             Met Arg Arg Phe Leu Arg Pro Gly His Asp Pro Val Arg
             1             5             10

gag agg ctc aag cgg gac ctg ttc cag ttt aac aag acg gtg gag cat      217
Glu Arg Leu Lys Arg Asp Leu Phe Gln Phe Asn Lys Thr Val Glu His
             15             20             25

ggc ttc ccg cac cag ccc agc gcc ctc ggc tac agc ccg tcc ctg cgc      265
Gly Phe Pro His Gln Pro Ser Ala Leu Gly Tyr Ser Pro Ser Leu Arg
             30             35             40             45

atc ctg gcc atc ggc acc cgt tct gga gcc atc aag ctc tac gga gcc      313
Ile Leu Ala Ile Gly Thr Arg Ser Gly Ala Ile Lys Leu Tyr Gly Ala
             50             55             60

cca ggc gtg gag ttc atg ggg ctg cac cag gag aac aac gct gtg acg      361
Pro Gly Val Glu Phe Met Gly Leu His Gln Glu Asn Asn Ala Val Thr
             65             70             75

cag atc cac ctc ctg ccc ggc cag tgc cag ctg gtc acc ctg ctg gat      409
Gln Ile His Leu Leu Pro Gly Gln Cys Gln Leu Val Thr Leu Leu Asp
             80             85             90

gac aac agc ctg cac ctt tgg agc ctg aag gtc aag ggc ggg gca tcg      457
Asp Asn Ser Leu His Leu Trp Ser Leu Lys Val Lys Gly Gly Ala Ser
             95             100             105

gag ctg cag gag gat gag agc ttc aca ctg cgt gga ccc cca ggg gct      505
Glu Leu Gln Glu Asp Glu Ser Phe Thr Leu Arg Gly Pro Pro Gly Ala
             110             115             120             125

gcc ccc agt gcc aca cag atc acc gtg gtc ctg cca cat tcc tcc tgc      553
Ala Pro Ser Ala Thr Gln Ile Thr Val Val Leu Pro His Ser Ser Cys
             130             135             140

gag ctg ctc tac ctg ggc acc gag agt ggc aac gtg ttt gtg gtg cag      601
Glu Leu Leu Tyr Leu Gly Thr Glu Ser Gly Asn Val Phe Val Val Gln
             145             150             155

ctg cca gct ttt cgt gcg ctg gag gac cgg acc atc agc tcg gac gcg      649
Leu Pro Ala Phe Arg Ala Leu Glu Asp Arg Thr Ile Ser Ser Asp Ala
             160             165             170

gtg ctg cag cgg ttg cca gag gag gcc cgc cac cgg cgt gtg ttc gag      697
Val Leu Gln Arg Leu Pro Glu Glu Ala Arg His Arg Arg Val Phe Glu
             175             180             185

```

atg gtg gag gca ctg cag gag cac cct cga gac ccc aac cag atc ctg Met Val Glu Ala Leu Gln Glu His Pro Arg Asp Pro Asn Gln Ile Leu 190 195 200 205	745
atc ggc tac agc cga ggc ctc gtt gtc atc tgg gac cta cag ggc agc Ile Gly Tyr Ser Arg Gly Leu Val Val Ile Trp Asp Leu Gln Gly Ser 210 215 220	793
cgc gtg ctc tac cac ttc ctc agc agc cag caa ctg gag aac atc tgg Arg Val Leu Tyr His Phe Leu Ser Ser Gln Gln Leu Glu Asn Ile Trp 225 230 235	841
tgg cag cgg gac ggc cgc ctg ctc gtc agc tgt cac tct gac ggc agc Trp Gln Arg Asp Gly Arg Leu Leu Val Ser Cys His Ser Asp Gly Ser 240 245 250	889
tac tgc cag tgg ccc gtg tcc agc gaa gcc cag caa cca gag ccc ctc Tyr Cys Gln Trp Pro Val Ser Ser Glu Ala Gln Gln Pro Glu Pro Leu 255 260 265	937
cgc agc ctc gtg cct tac gcc ttt gac gac ccc tat gcc ctg gtg gtg Arg Ser Leu Val Pro Tyr Ala Phe Asp Asp Pro Tyr Ala Leu Val Val 270 275 280 285	985
ctg gct gag gag gag ctg gtg gtg att gac ctg cag aca gca ggc tgg Leu Ala Glu Glu Glu Leu Val Val Ile Asp Leu Gln Thr Ala Gly Trp 290 295 300	1033
cca ccg gtc cag ctg ccc tac ctg gct tct ctg cac tgt tcc gcc atc Pro Pro Val Gln Leu Pro Tyr Leu Ala Ser Leu His Cys Ser Ala Ile 305 310 315	1081
acc tgc tct cac cac gtc tcc aac atc ccg ctg aag ctg tgg gag cgg Thr Cys Ser His His Val Ser Asn Ile Pro Leu Lys Leu Trp Glu Arg 320 325 330	1129
atc att gcc gcc ggc agc cgg cag aac gca cac ttc tcc acc atg gag Ile Ile Ala Ala Gly Ser Arg Gln Asn Ala His Phe Ser Thr Met Glu 335 340 345	1177
tgg cca att gat ggt ggc acc agc ctg acc cca gcc cca ccc cag agg Trp Pro Ile Asp Gly Gly Thr Ser Leu Thr Pro Ala Pro Pro Gln Arg 350 355 360 365	1225
gac ctg ctg ctc aca ggg cac gag gac ggc acg gtg cgg ttc tgg gat Asp Leu Leu Leu Thr Gly His Glu Asp Gly Thr Val Arg Phe Trp Asp 370 375 380	1273
gcc tcg ggt gtc tgc ctg cgg ctg ctc tac aaa ctc agc act gtg cgc Ala Ser Gly Val Cys Leu Arg Leu Leu Tyr Lys Leu Ser Thr Val Arg 385 390 395	1321
gtg ttc ctc acc gac acg gac ccc aac gag aac ttc agt gcc cag ggc Val Phe Leu Thr Asp Thr Asp Pro Asn Glu Asn Phe Ser Ala Gln Gly 400 405 410	1369
gag gac gag tgg ccc cca ctc cgc aag gtg ggc tcc ttt gac ccc tac Glu Asp Glu Trp Pro Pro Leu Arg Lys Val Gly Ser Phe Asp Pro Tyr 415 420 425	1417
agt gat gac ccc cgg ctg ggc atc cag aag atc ttc ctc tgc aag tac Ser Asp Asp Pro Arg Leu Gly Ile Gln Lys Ile Phe Leu Cys Lys Tyr 430 435 440 445	1465

agc ggc tac ctg gct gtg gca ggc acg gca ggg cag gtg ctg gta ctg Ser Gly Tyr Leu Ala Val Ala Gly Thr Ala Gly Gln Val Leu Val Leu 450 455 460	1513
gaa ctg aat gac gag gca gcg gag cag gct gtg gag cag gtg gag gcc Glu Leu Asn Asp Glu Ala Ala Glu Gln Ala Val Glu Gln Val Glu Ala 465 470 475	1561
gac ctg ctg cag gac caa gag ggc tac cgc tgg aag ggg cac gag cgc Asp Leu Leu Gln Asp Gln Glu Gly Tyr Arg Trp Lys Gly His Glu Arg 480 485 490	1609
ctg gca gcc cgc tca ggg ccc gtg cgc ttt gag cct ggc ttt cag ccc Leu Ala Ala Arg Ser Gly Pro Val Arg Phe Glu Pro Gly Phe Gln Pro 495 500 505	1657
ttc gtg ttg gtg cag tgt cag ccc ccg gct gtg gtc acc tcc ttg gcc Phe Val Leu Val Gln Cys Gln Pro Pro Ala Val Val Thr Ser Leu Ala 510 515 520 525	1705
ctg cac tct gag tgg cgg ctc gtg gcc ttc ggc acc agc cat ggc ttt Leu His Ser Glu Trp Arg Leu Val Ala Phe Gly Thr Ser His Gly Phe 530 535 540	1753
ggc ctc ttt gac cac cag cag cgg cgg cag gtc ttt gtt aag tgc aca Gly Leu Phe Asp His Gln Gln Arg Arg Gln Val Phe Val Lys Cys Thr 545 550 555	1801
ctg cac ccc agt gac cag ctg gcc ttg gag ggc cca ctc tcc cgc gtc Leu His Pro Ser Asp Gln Leu Ala Leu Glu Gly Pro Leu Ser Arg Val 560 565 570	1849
aag tcc ctc aag aag tcc ttg cgt cag tca ttc cgc cgg atg cgt cgg Lys Ser Leu Lys Lys Ser Leu Arg Gln Ser Phe Arg Arg Met Arg Arg 575 580 585	1897
agc cgg gtg tcc agc cgg aag cgg cac ccg gct ggc ccc cca gga gag Ser Arg Val Ser Ser Arg Lys Arg His Pro Ala Gly Pro Pro Gly Glu 590 595 600 605	1945
gca cag gag ggg agt gcc aag gct gag cgg cca ggc ctc cag aac atg Ala Gln Glu Gly Ser Ala Lys Ala Glu Arg Pro Gly Leu Gln Asn Met 610 615 620	1993
gag ctg gcg cct gtg cag cgc aag atc gag gct cgc tcg gca gag gac Glu Leu Ala Pro Val Gln Arg Lys Ile Glu Ala Arg Ser Ala Glu Asp 625 630 635	2041
tcc ttc aca ggc ttc gtc cgg acc ctg tac ttt gct gac acc tac ctg Ser Phe Thr Gly Phe Val Arg Thr Leu Tyr Phe Ala Asp Thr Tyr Leu 640 645 650	2089
aag gac agc tcc cgg cac tgc ccc tcg ctg tgg gct ggc acc aat ggg Lys Asp Ser Ser Arg His Cys Pro Ser Leu Trp Ala Gly Thr Asn Gly 655 660 665	2137
ggc acc atc tat gcc ttc tcc ctg cgt gtg cct ccc gcc gag cgg aga Gly Thr Ile Tyr Ala Phe Ser Leu Arg Val Pro Pro Ala Glu Arg Arg 670 675 680 685	2185
atg gat gag cct gtg cgg gca gag cag gcc aag gag atc cag ctg atg Met Asp Glu Pro Val Arg Ala Glu Gln Ala Lys Glu Ile Gln Leu Met 690 695 700	2233

cac cgg gcg ccg gtg gtg ggc atc ctg gtg ctc gac gga cac agc gta His Arg Ala Pro Val Val Gly Ile Leu Val Leu Asp Gly His Ser Val 705 710 715	2281
ccc ctt ccc gag ccc ctc gaa gtg gcc cat gat ctg tcg aag agc cct Pro Leu Pro Glu Pro Leu Glu Val Ala His Asp Leu Ser Lys Ser Pro 720 725 730	2329
gac atg cag gga agc cac cag ctg ctc gtc gta tca gag gag cag ttc Asp Met Gln Gly Ser His Gln Leu Leu Val Val Ser Glu Glu Gln Phe 735 740 745	2377
aag gtg ttc acg ctg ccc aag gtg agt gcc aag ctg aag ttg aag ctg Lys Val Phe Thr Leu Pro Lys Val Ser Ala Lys Leu Lys Leu Lys Leu 750 755 760 765	2425
acg gcc ctg gag ggc tca aga gtg cgg cgg gtc agc gtg gcc cac ttc Thr Ala Leu Glu Gly Ser Arg Val Arg Arg Val Ser Val Ala His Phe 770 775 780	2473
ggc agt cgt cga gcc gag gac tac ggg gag cac cac ctg gca gtc ctt Gly Ser Arg Arg Ala Glu Asp Tyr Gly Glu His His Leu Ala Val Leu 785 790 795	2521
acc aac ctg ggc gac atc cag gtg gtc tcg ctg ccc ctg ctc aag ccc Thr Asn Leu Gly Asp Ile Gln Val Val Ser Leu Pro Leu Leu Lys Pro 800 805 810	2569
cag gtg cgc tac agc tgc atc cgc cgg gag gac gtc agt ggc atc gcc Gln Val Arg Tyr Ser Cys Ile Arg Arg Glu Asp Val Ser Gly Ile Ala 815 820 825	2617
tcc tgc gtc ttc acc aaa tat ggc caa ggc ttc tac ctg atc tca ccc Ser Cys Val Phe Thr Lys Tyr Gly Gln Gly Phe Tyr Leu Ile Ser Pro 830 835 840 845	2665
tcg gag ttt gag cgc ttc tct ctc tcc acc aag tgg ctg gtg gag ccc Ser Glu Phe Glu Arg Phe Ser Leu Ser Thr Lys Trp Leu Val Glu Pro 850 855 860	2713
cgg tgt ctg gtg gat tca gca gaa acc aag aac cac cgc cct ggt aac Arg Cys Leu Val Asp Ser Ala Glu Thr Lys Asn His Arg Pro Gly Asn 865 870 875	2761
ggt gcg ggc ccc aag aag gcc ccg agc cga gcc agg aac tca ggg act Gly Ala Gly Pro Lys Lys Ala Pro Ser Arg Ala Arg Asn Ser Gly Thr 880 885 890	2809
cag agt gat ggc gag gag aag cag ccc ggc ctg gtg atg gag cgc gct Gln Ser Asp Gly Glu Glu Lys Gln Pro Gly Leu Val Met Glu Arg Ala 895 900 905	2857
ctg ctc agt gat gag aga gcg gca act ggc gtt cac atc gag ccg ccg Leu Leu Ser Asp Glu Arg Ala Ala Thr Gly Val His Ile Glu Pro Pro 910 915 920 925	2905
tgg ggt gca gcc tca gca atg gcg gag cag agt gag tgg ctg agc gtc Trp Gly Ala Ala Ser Ala Met Ala Glu Gln Ser Glu Trp Leu Ser Val 930 935 940	2953
cag gct gcg cga tga gcacacacta ctactgatgg cctttcgggg gtcctgccc Gln Ala Ala Arg * 945	3008

caaccggaga ggccggtgca cagggccccc ccaggggctg ggggcattccc ggcttccaca 3068
 atgcagctgc tctgggcctc gggagaggag agaccccagt cccctgggct gcccttcccg 3128
 ggccctcgtct gtctgggtcc tttggtcaat gttgcacagt ttttattgct cccatccctt 3188
 tttgtagtgg gctgggtttt aagttataaa tgtaaactgc ctctgggtga aaaagttttt 3248
 aataaacacc tattacctct tgaaaa 3274

<210> 916
 <211> 5250
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (166)..(2499)

<400> 916
 ggtgactcag gaggaccctt ggtctgcgag gagccctctg gccggttctt tctggctggc 60
 atcgtgagct ggggaatcgg gtgtgcggaa gcccggcgtc caggggtcta tgcccagatc 120
 accaggctac gtgactggat cctggaggcc accaccaaag ccagc atg cct ctg 174
 Met Pro Leu
 1
 gcc ccc acc atg gct cct gcc cct gcc gcc ccc agc aca gcc tgg ccc 222
 Ala Pro Thr Met Ala Pro Ala Pro Ala Ala Pro Ser Thr Ala Trp Pro
 5 10 15
 acc agt cct gag agc cct gtg gtc agc acc ccc acc aaa tcg atg cag 270
 Thr Ser Pro Glu Ser Pro Val Val Ser Thr Pro Thr Lys Ser Met Gln
 20 25 30 35
 gcc ctc agt acc gtg cct ctt gac tgg gtc acc gtt cct aag cta caa 318
 Ala Leu Ser Thr Val Pro Leu Asp Trp Val Thr Val Pro Lys Leu Gln
 40 45 50
 gaa tgt ggg gcc agg cct gca atg gag aag ccc acc cgg gtc gtg ggc 366
 Glu Cys Gly Ala Arg Pro Ala Met Glu Lys Pro Thr Arg Val Val Gly
 55 60 65
 ggg ttc gga gct gcc tcc ggg gag gtg ccc tgg cag gtc agc ctg aag 414
 Gly Phe Gly Ala Ala Ser Gly Glu Val Pro Trp Gln Val Ser Leu Lys
 70 75 80
 gaa ggg tcc cgg cac ttc tgc gga gca act gtg gtg ggg gac cgc tgg 462
 Glu Gly Ser Arg His Phe Cys Gly Ala Thr Val Val Gly Asp Arg Trp
 85 90 95
 ctg ctg tct gcc gcc cac tgc ttc aac cac acg aag gtg gag cag gtt 510
 Leu Leu Ser Ala Ala His Cys Phe Asn His Thr Lys Val Glu Gln Val
 100 105 110 115
 cgg gcc cac ctg ggc act gcg tcc ctc ctg ggc ctg ggc ggg agc ccg 558
 Arg Ala His Leu Gly Thr Ala Ser Leu Leu Gly Leu Gly Gly Ser Pro
 120 125 130

gtg aag atc ggg ctg cgg cgg gta gtg ctg cac ccc ctc tac aac cct	606
Val Lys Ile Gly Leu Arg Arg Val Val Leu His Pro Leu Tyr Asn Pro	
135 140 145	
ggc atc ctg gac ttc gac ctg gct gtc ctg gag ctg gcc agc ccc ctg	654
Gly Ile Leu Asp Phe Asp Leu Ala Val Leu Glu Leu Ala Ser Pro Leu	
150 155 160	
gcc ttc aac aaa tac atc cag cct gtc tgc ctg ccc ctg gcc atc cag	702
Ala Phe Asn Lys Tyr Ile Gln Pro Val Cys Leu Pro Leu Ala Ile Gln	
165 170 175	
aag ttc cct gtg ggc cgg aag tgc atg atc tcc gga tgg gga aat acg	750
Lys Phe Pro Val Gly Arg Lys Cys Met Ile Ser Gly Trp Gly Asn Thr	
180 185 190 195	
cag gaa gga aat gcc acc aag ccc gag ctc ctg cag aag gcg tcc gtg	798
Gln Glu Gly Asn Ala Thr Lys Pro Glu Leu Leu Gln Lys Ala Ser Val	
200 205 210	
ggc atc ata gac cag aaa acc tgt agt gtg ctc tac aac ttc tcc ctc	846
Gly Ile Ile Asp Gln Lys Thr Cys Ser Val Leu Tyr Asn Phe Ser Leu	
215 220 225	
aca gac cgc atg atc tgc gca ggc ttc ctg gaa ggc aaa gtc gac tcc	894
Thr Asp Arg Met Ile Cys Ala Gly Phe Leu Glu Gly Lys Val Asp Ser	
230 235 240	
tgc cag gtg agt ggc atc aag gcg ctg tac gag tgc gag ctg gcc gat	942
Cys Gln Val Ser Gly Ile Lys Ala Leu Tyr Glu Ser Glu Leu Ala Asp	
245 250 255	
gcc cgg aga gtc ctg gat gag acg gct cga gag cgt gcc cgg ctg cag	990
Ala Arg Arg Val Leu Asp Glu Thr Ala Arg Glu Arg Ala Arg Leu Gln	
260 265 270 275	
ata gag att ggg aag ctg agg gca gag ttg gac gag gtc aac aag agc	1038
Ile Glu Ile Gly Lys Leu Arg Ala Glu Leu Asp Glu Val Asn Lys Ser	
280 285 290	
gcc aag aag agg gag ggc gag ctt acg gtg gcc cag ggc cgt gtg aag	1086
Ala Lys Lys Arg Glu Gly Glu Leu Thr Val Ala Gln Gly Arg Val Lys	
295 300 305	
gac ctg gag tcc ctg ttc cac cgg agc gag gtg gag ctg gca gct gcc	1134
Asp Leu Glu Ser Leu Phe His Arg Ser Glu Val Glu Leu Ala Ala Ala	
310 315 320	
ctc agc gac aag cgc ggc ctg gag agt gac gtg gct gag ctg cgg gcc	1182
Leu Ser Asp Lys Arg Gly Leu Glu Ser Asp Val Ala Glu Leu Arg Ala	
325 330 335	
cag ctg gcc aag gcc gag gac ggt cat gca gtg gcc aaa aag cag ctg	1230
Gln Leu Ala Lys Ala Glu Asp Gly His Ala Val Ala Lys Lys Gln Leu	
340 345 350 355	
gag aag gag acg ctg atg cgt gtg gac ctg gag aac cgc tgc cag agc	1278
Glu Lys Glu Thr Leu Met Arg Val Asp Leu Glu Asn Arg Cys Gln Ser	
360 365 370	
ctg cag gag gag ctg gac ttc cgg aag agt gtg ttc gag gag gag gtg	1326
Leu Gln Glu Glu Leu Asp Phe Arg Lys Ser Val Phe Glu Glu Glu Val	
375 380 385	

cgg gag acg Arg Glu Thr 390	cgg cgg cgg Arg Arg Arg	cac gag cgg His Glu Arg 395	cgc ctg gtg Arg Leu Val 400	gag gtg gac Glu Val Asp 400	agc Ser	1374
agc cgg cag Ser Arg Gln 405	cag gag tac Gln Glu Tyr 410	gac ttc aag Asp Phe Lys 410	atg gca cag Met Ala Gln 415	gcg ctg gag Ala Ala Leu 415	gag gag Glu Glu	1422
ctg cgg agc Leu Arg Ser 420	cag cac gac Gln His Asp 425	gag caa gtg Glu Gln Val 430	cgg ctc tac Arg Leu Tyr 430	aag ctg gag Lys Leu Glu 435	ctg Leu	1470
gag cag acc Glu Gln Thr 440	tac cag gcc Tyr Gln Ala 440	aag ctg gac Lys Leu Asp 445	agc gcc aag Ser Ala Lys 445	ctg agc tct Leu Ser Ser 450	gac Asp	1518
cag aac gac Gln Asn Asp 455	aag gcg gcc Lys Ala Ala 455	agt gcg gct Ser Ala Ala 460	cgc gag gag Arg Glu Glu 465	ctg aag gag Leu Lys Glu 465	gcc Ala	1566
cgc atg cgc Arg Met Arg 470	ctg gag tcc Leu Glu Ser 475	ctc agc tac Leu Ser Tyr 475	cag ctc tcc Gln Leu Ser 480	ggc ctc cag Gly Leu Gln 480	aag Lys	1614
cag gcc agt Gln Ala Ser 485	gcc gct gaa Ala Ala Glu 490	gat cgc att Asp Arg Ile 495	cgg gag ctg Arg Glu Leu 495	gag gag gcc Glu Glu Ala 495	atg Met	1662
gcc ggg gag Ala Gly Glu 500	cgg gac aag Arg Asp Lys 505	ttc cgg aag Phe Arg Lys 510	atg ctg gac Met Leu Asp 510	gcc aag gag Ala Lys Glu 515	cag Gln	1710
gag atg acg Glu Met Thr 520	gag atg cgg Glu Met Arg 520	gac gtg atg Asp Val Met 525	cag cag cag Gln Gln Gln 525	ctg gcc gag Leu Ala Glu 530	tac Tyr	1758
cag gag ctg Gln Glu Leu 535	ctg gac gtg Leu Asp Val 540	aag ctg gcc Lys Leu Ala 540	ctg gac atg Leu Asp Met 545	gag atc aac Glu Ile Asn 545	gcc Ala	1806
tac cgg aag Tyr Arg Lys 550	ctc ctg gag Leu Leu Glu 555	ggc gag gag Gly Glu Glu 555	gag agg ctg Glu Arg Leu 560	aag ctg tcc Lys Leu Ser 560	ccc Pro	1854
agc cca tcc Ser Pro Ser 565	tcg cgc gtc Ser Arg Val 570	acc gtc tca Thr Val Ser 575	cga gcc acc Arg Ala Thr 575	tcg agc agc Ser Ser Ser 575	agc Ser	1902
ggc agc ttg Gly Ser Leu 580	tcc gcc acc Ser Ala Thr 585	ggg cgc ctg Gly Arg Leu 590	ggc cgc agt Gly Arg Ser 590	aag cgg aag Lys Arg Lys 595	cgg Arg	1950
ctg gag gtg Leu Glu Val 600	gag gag ccc Glu Glu Pro 600	ttg ggc agc Leu Gly Ser 605	ggc cca agc Gly Pro Ser 605	gtc ctg ggc Val Leu Gly 610	acg Thr	1998
ggc acg ggt Gly Thr Gly 615	ggc agc ggt Gly Ser Gly 615	ggc ttc cac Gly Phe His 620	ctg gcc cag Leu Ala Gln 625	cag cag gcc Gln Gln Ala 625	tcg gcc Ser Ala	2046
tcg ggc agc Ser Gly Ser 630	gtc agc atc Val Ser Ile 635	gag gag atc Glu Glu Ile 635	gac ctg gag Asp Leu Glu 640	ggc aag ttt Gly Lys Phe 640	gtg Val	2094

cag ctc aag aac aac tcg gac aag gat cag tct ctg ggg aac tgg aga 2142
 Gln Leu Lys Asn Asn Ser Asp Lys Asp Gln Ser Leu Gly Asn Trp Arg
 645 650 655

atc aag agg cag gtc ttg gag ggg gag gag atc gcc tac aag ttc acg 2190
 Ile Lys Arg Gln Val Leu Glu Gly Glu Glu Ile Ala Tyr Lys Phe Thr
 660 665 670 675

ccc aag tac atc ctg cgc gcc ggc cag atg gtc acg gtg tgg gca gct 2238
 Pro Lys Tyr Ile Leu Arg Ala Gly Gln Met Val Thr Val Trp Ala Ala
 680 685 690

ggt gcg ggg gtg gcc cac agc ccc ccc tcg acg ctg gtg tgg aag ggc 2286
 Gly Ala Gly Val Ala His Ser Pro Ser Thr Leu Val Trp Lys Gly
 695 700 705

cag agc agc tgg ggc acg ggc gag agc ttc cgc acc gtc ctg gtt aac 2334
 Gln Ser Ser Trp Gly Thr Gly Glu Ser Phe Arg Thr Val Leu Val Asn
 710 715 720

gcg gat ggc gag gaa gtg gcc atg agg act gtg aag aag tcc tcg gtg 2382
 Ala Asp Gly Glu Glu Val Ala Met Arg Thr Val Lys Lys Ser Ser Val
 725 730 735

atg cgt gag aat gag aat ggg gag gaa gag gag gag gaa gcc gag ttt 2430
 Met Arg Glu Asn Glu Asn Gly Glu Glu Glu Glu Glu Glu Ala Glu Phe
 740 745 750 755

ggc gag gag gat ctt ttc cac caa cag ggg gac ccg agg acc acc tca 2478
 Gly Glu Glu Asp Leu Phe His Gln Gln Gly Asp Pro Arg Thr Thr Ser
 760 765 770

aga ggc tgc tac gtg atg tga ac ccacactcct catccacaca cctttcttta 2531
 Arg Gly Cys Tyr Val Met *
 775

cccagagcca ctgaaaacta tttttatatac attggctttc tttagttctt gatacatttc 2591

tagagaattt ctaagcgaac tgccagaacg tgtgggtggg tctccccag cctccctcc 2651

tggcgggtct cctccagcct cacttcgctg ccacttcgcc gctgccccgg agacttttca 2711

atcccccccc actcctcatc tcaccatttg gtcaaattgg aagcccaggg ccaggacccg 2771

gaggtttaga agatgcttgg gcttggaggg aggagggccg gcgaggctag cgaggggaca 2831

ggagacggcc ctgctgcgga cggagcgcgg aaactgcgta ggaattcagt ggtggtgggt 2891

ttttttaagg ctttctacaa aaccaaattc agaatccagg cgtcgacctg gtggggcccc 2951

gggccaagcc tgcattctgg ctgccagct tcggacagcg ggaactcctc aggcagccac 3011

gcagcgggtg tgggcccagca tggggatggc gtggcccccga gggcgggttt tcaactccgt 3071

gcctgggctt ccagattccc gttctggcag cgcaccggcc gggtttctcg gaccgttgac 3131

tttatttggg ggagttttcc cgcagttcag ttcttgactg tgcagggccca acagggcagg 3191

ggaggggaag acctggggaa ggaagaatga ggacagtccc gtcgtaagac ctgtcacaac 3251

aataagcagg gaggggagat gtggagggga cacatctggt tgccttgag gcagaagctg 3311

tgagtttcag aacagctgtc tgcagggaac gccaccatgt tgaccctctg gaggagagcg 3371

ctgtggagcc cctcccgtgt tccagctccg tctgccctgt gcctatatat acacatgcgt 3431
ctatccatac tgtgtcttta tctgtgattt tctcgctgaa accatgtttc tcagacaggc 3491
caaggccacc tgactcctat cagcagcac ccaagcccct cagtccagct tcccaatgcc 3551
tggcaccccc cttcggcaat agctcacctt ttacaccctc cctcatagat acacagaagt 3611
tattttttta atggatattt atttttttac attggtcagt acacaggtca ggagctcacg 3671
ccagggcctt gaggacaggc tgaccctcct ccccggggtg gcgtggggct ggggcaccct 3731
ccgacggcag agcctccttc agaaagtgca gctcaagtct taaagacacc aaaactgagc 3791
catgggcacg cgcctctcc gggccatggc gttcactgca gggcgggggc ggcaccgctc 3851
ccctgtgact gcaccccgcc tccctgggga cctgcctgtg gcaggaagga atgggggggc 3911
ccagcccagg ccgggaagga gccagcggcc gacaaagcag aaacacccgc tgctccacgt 3971
agccctgct ggctgtcctt gctctcagaa gtcccggtcc catgtagata gagcccggcg 4031
gatcttacca aagcatttcc tectggaggc tacgcgcctt ggtgctccca gtgaggcggc 4091
tggtagggag ctttgctgc cccggggata ccctctacca gccgctggaa gtgggaatgc 4151
tggcgacaga ctgtgtctgt tccccacct catagcagga atcaccggga cccgactggc 4211
tgggcttcgt gctagcgagg gttttctggg ggtgggtctt ggtgatcttg tcctatgggg 4271
atctctgcag tggctctcag cacatcctag tatattttgg ctctggagga gcaaagctgt 4331
atcctggagt tggctctgtga tttgccgaca gacttgacag ctgggctcag caaagtcccc 4391
cccaaaacc gcaggtcctc atgtccagac gctgccagtc ctgtcctgaa aacagcacgc 4451
cccaggccca cagaaccccc caccctacat ttgccttggg tggagctggg ggtggtccta 4511
ggactgcggg tgcccttagc tgaagggggc ccgcagaagc gtgagctggg ccgcctgtgg 4571
gtcattggag gttcattgag aattgagtct ttggaaacac taagaaaatc aaatttttaa 4631
aagttattta tggcctggga aacaatttgc atttgtcccc aaatacgctt agctgtgtgc 4691
cgcttagaac gatgcgaaac catccctctg tgtaagcccg tgccgtgtga ctggaagcct 4751
agcgcctcc ctgcgaagca tcagacgcca ccagccctg gggggaggcc cagcctgct 4811
ggaccaacgc gggttctggg gtgcacagcg ccaggttaac gctgaagcct gccccgtga 4871
gccaggagc cgggaggcct gcgggctgac ccagaatccg atcatgcacc tgtcctcatg 4931
ccagcggtt tggctggggg tggctgaag cctgcacgcg gcagtctttt gttaaagatc 4991
tgagggactc ctcagtcctg gggcgctgcc gcctgcagcc tctccaagc cctgcgtcca 5051
gcgagcgtca cagcacaacc tgcaaaaacg gagctgggct gcagctgggg ctggcatgga 5111
ctttcatttc agagattcgg tttttaagaa gatgcagcc taatgtgttc tttttttttt 5171
ccaatgattt gtaatatata ttttatgact ggaaactttt ttgtacaaca ctccaataaa 5231
cattttgatt ttaaaaaaa 5250

<210> 917
 <211> 2066
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (85)..(1932)

<400> 917
 aggtaccgcg ccggaattcc cggggacggt cgcaaggatt acattcgctt gacccggccc 60
 ggcttgaccc tgcccgggag cgcc atg ttc gcg cgt ggg tcc cgg agg cgc 111
 Met Phe Ala Arg Gly Ser Arg Arg Arg
 1 5
 cgc tcc ggg cgt gcg cct cca gag gca gag gac cca gac cgg ggc cag 159
 Arg Ser Gly Arg Ala Pro Glu Ala Glu Asp Pro Asp Arg Gly Gln
 10 15 20 25
 ccc tgc aac tcc tgt agg gag cag tgc cct ggc ttc ctg ctc cac ggc 207
 Pro Cys Asn Ser Cys Arg Glu Gln Cys Pro Gly Phe Leu Leu His Gly
 30 35 40
 tgg aga aag atc tgc cag cat tgc aaa tgc ccg cgg gag gag cat gca 255
 Trp Arg Lys Ile Cys Gln His Cys Lys Cys Pro Arg Glu Glu His Ala
 45 50 55
 gtg cac gcg gtg cct gtg gac ctg gaa cgc atc atg tgt cgg cta atc 303
 Val His Ala Val Pro Val Asp Leu Glu Arg Ile Met Cys Arg Leu Ile
 60 65 70
 tcg gac ttc cag cgc cac tcc atc tcc gac gac gac tca ggc tgt gca 351
 Ser Asp Phe Gln Arg His Ser Ile Ser Asp Asp Asp Ser Gly Cys Ala
 75 80 85
 tcg gag gag tat gcc tgg gtg ccc cca ggc ctt aag ccg gag cag gta 399
 Ser Glu Glu Tyr Ala Trp Val Pro Pro Gly Leu Lys Pro Glu Gln Val
 90 95 100 105
 tat caa ttt ttc agc tgc ctc cca gag gac aag gtc ccc tac gtc aac 447
 Tyr Gln Phe Phe Ser Cys Leu Pro Glu Asp Lys Val Pro Tyr Val Asn
 110 115 120
 agt cct ggg gag aaa tac agg atc aag cag ctg ctg cac cag ctg ccc 495
 Ser Pro Gly Glu Lys Tyr Arg Ile Lys Gln Leu Leu His Gln Leu Pro
 125 130 135
 cca cac gac agt gag gca cag tac tgc aca gca ctg gaa gag gag gaa 543
 Pro His Asp Ser Glu Ala Gln Tyr Cys Thr Ala Leu Glu Glu Glu Glu
 140 145 150
 aag aaa gag ctc cga gcc ttt agc cag cag cgg aag cgg gag aat ctg 591
 Lys Lys Glu Leu Arg Ala Phe Ser Gln Gln Arg Lys Arg Glu Asn Leu
 155 160 165
 ggg cgt ggc atc gtg cgc atc ttc ccg gtg acc atc act ggg gcc atc 639
 Gly Arg Gly Ile Val Arg Ile Phe Pro Val Thr Ile Thr Gly Ala Ile
 170 175 180 185
 tgt gag gag tgc gga aag cag att gga ggt ggg gac atc gca gtg ttt 687

Cys Glu Glu Cys Gly Lys Gln Ile Gly Gly Gly Asp Ile Ala Val Phe	
190 195 200	
gcc agc cgt gca ggc ctg ggt gcc tgc tgg cac cca cag tgc ttc gtg	735
Ala Ser Arg Ala Gly Leu Gly Ala Cys Trp His Pro Gln Cys Phe Val	
205 210 215	
tgt acc acg tgc cag gaa ctg ctg gtt gac ctc atc tac ttc tac cat	783
Cys Thr Thr Cys Gln Glu Leu Leu Val Asp Leu Ile Tyr Phe Tyr His	
220 225 230	
gtt ggc aag gtc tac tgc ggg cgt cac cat gcc gaa tgc ctg cgt cca	831
Val Gly Lys Val Tyr Cys Gly Arg His His Ala Glu Cys Leu Arg Pro	
235 240 245	
cgc tgc caa gcc tgt gac gag atc atc ttc tcc cct gag tgc acg gag	879
Arg Cys Gln Ala Cys Asp Glu Ile Ile Phe Ser Pro Glu Cys Thr Glu	
250 255 260 265	
gct gag ggc cgc cac tgg cac atg gat cac ttc tgc tgc ttt gag tgt	927
Ala Glu Gly Arg His Trp His Met Asp His Phe Cys Cys Phe Glu Cys	
270 275 280	
gaa gct tca cta gga ggg cag cgc tat gtc atg cgt cag agc cgc ccc	975
Glu Ala Ser Leu Gly Gly Gln Arg Tyr Val Met Arg Gln Ser Arg Pro	
285 290 295	
cac tgc tgc gcc tgc tac gag gcc cgc cac gcg gag tac tgt gat ggc	1023
His Cys Cys Ala Cys Tyr Glu Ala Arg His Ala Glu Tyr Cys Asp Gly	
300 305 310	
tgt ggg gag cac atc ggc ctg gac caa ggc cag atg gct tac gag ggc	1071
Cys Gly Glu His Ile Gly Leu Asp Gln Gly Gln Met Ala Tyr Glu Gly	
315 320 325	
cag cac tgg cat gcc tca gac cgc tgc ttc tgc tgt agt cgc tgt ggg	1119
Gln His Trp His Ala Ser Asp Arg Cys Phe Cys Cys Ser Arg Cys Gly	
330 335 340 345	
cgg gcc ctg ctg ggc cgc cca ttc ctg cca cgc cga ggc cta atc ttc	1167
Arg Ala Leu Leu Gly Arg Pro Phe Leu Pro Arg Arg Gly Leu Ile Phe	
350 355 360	
tgc tct cga gcc tgc agc ctt ggg tcc gag ccc aca gct cca ggg ccg	1215
Cys Ser Arg Ala Cys Ser Leu Gly Ser Glu Pro Thr Ala Pro Gly Pro	
365 370 375	
agc cgc cgc agc tgg agt gcc ggc cct gtc aca gcc cca ctt gca gcc	1263
Ser Arg Arg Ser Trp Ser Ala Gly Pro Val Thr Ala Pro Leu Ala Ala	
380 385 390	
tcc aca gcc tct ttc tct gct gtg aag ggg gca tca gag acc acc acc	1311
Ser Thr Ala Ser Phe Ser Ala Val Lys Gly Ala Ser Glu Thr Thr Thr	
395 400 405	
aaa ggc acc agc aca gag tta gcg cca gct aca ggc cct gag gag ccc	1359
Lys Gly Thr Ser Thr Glu Leu Ala Pro Ala Thr Gly Pro Glu Glu Pro	
410 415 420 425	
tcc cgc ttt ctg aga ggg gct ccc cac cgc cac tcc atg ccg gaa ctg	1407
Ser Arg Phe Leu Arg Gly Ala Pro His Arg His Ser Met Pro Glu Leu	
430 435 440	
ggg ctc cgc agt gtc ccc gag ccg ccc cca gag tcc ccc ggc cag cct	1455

Gly	Leu	Arg	Ser	Val	Pro	Glu	Pro	Pro	Pro	Glu	Ser	Pro	Gly	Gln	Pro		
			445					450					455				
aac	ctg	cgc	cca	gat	gat	agt	gcc	ttc	ggc	cgt	cag	agc	acc	cca	cgc	1503	
Asn	Leu	Arg	Pro	Asp	Asp	Ser	Ala	Phe	Gly	Arg	Gln	Ser	Thr	Pro	Arg		
			460				465					470					
gtc	agc	ttc	cgc	gac	cct	ctg	gtg	tct	gaa	gga	ggc	ccg	cgc	cgg	acc	1551	
Val	Ser	Phe	Arg	Asp	Pro	Leu	Val	Ser	Glu	Gly	Gly	Pro	Arg	Arg	Thr		
			475				480					485					
ctg	agt	gca	ccc	ccg	gcc	cag	cgc	cgc	agg	cca	cgc	agt	ccc	cca	ccc	1599	
Leu	Ser	Ala	Pro	Pro	Ala	Gln	Arg	Arg	Arg	Pro	Arg	Ser	Pro	Pro	Pro		
			490			495				500					505		
agg	gcc	ccc	agc	cgt	cgc	cgc	cac	cat	cat	cat	aat	cac	cat	cac	cat	1647	
Arg	Ala	Pro	Ser	Arg	Arg	Arg	His	His	His	His	Asn	His	His	His	His		
				510					515					520			
cac	aac	cgc	cac	cca	agc	aga	cgt	cgc	cac	tat	caa	tgt	gac	gcg	gga	1695	
His	Asn	Arg	His	Pro	Ser	Arg	Arg	Arg	His	Tyr	Gln	Cys	Asp	Ala	Gly		
			525					530					535				
tca	ggg	tca	gac	tcg	gaa	tct	tgc	tcc	agc	tcg	ccc	tcc	agt	tcc	agt	1743	
Ser	Gly	Ser	Asp	Ser	Glu	Ser	Cys	Ser	Ser	Ser	Pro	Ser	Ser	Ser	Ser		
			540				545					550					
tcc	gaa	tca	tca	gag	gat	gat	ggc	ttc	ttc	cta	gga	gag	cgc	atc	cct	1791	
Ser	Glu	Ser	Ser	Glu	Asp	Asp	Gly	Phe	Phe	Leu	Gly	Glu	Arg	Ile	Pro		
			555				560					565					
ctg	ccc	ccg	cat	ttg	tgc	agg	ccc	atg	cct	gct	cag	gac	act	gca	atg	1839	
Leu	Pro	Pro	His	Leu	Cys	Arg	Pro	Met	Pro	Ala	Gln	Asp	Thr	Ala	Met		
			570			575				580					585		
gag	acc	ttc	aac	tcc	cca	tct	tta	tcg	ctc	ccc	agg	gac	tct	cgc	gca	1887	
Glu	Thr	Phe	Asn	Ser	Pro	Ser	Leu	Ser	Leu	Pro	Arg	Asp	Ser	Arg	Ala		
				590				595						600			
ggg	atg	cct	cgt	cag	gcc	cga	gac	aag	aac	tgc	atc	gtg	gct	tga	agg	1935	
Gly	Met	Pro	Arg	Gln	Ala	Arg	Asp	Lys	Asn	Cys	Ile	Val	Ala	*			
			605					610					615				
caggccgctcc	tgaggggggc	tccattctcc	agtcagagta	gatgatgagg	cccatgcccc	1995											
tcacccccac	gccccgcccc	tacaacctaa	gtcataaatc	ctcttctctcc	ctccttttaa	2055											
aaaaaaaaa	a					2066											

<210> 918
 <211> 7137
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (47)..(3793)

<400> 918																	
ctatgcacgc	gtacgtaagc	ttggatcctc	tagagcggcc	gcggtg	atg	atg	acg	55									
					Met	Met	Thr										

1

ggc tac aat aat ggt cgc tgt ccc cgg aat tct ctc tac agt gac tgc	103
Gly Tyr Asn Asn Gly Arg Cys Pro Arg Asn Ser Leu Tyr Ser Asp Cys	
5 10 15	
att att gag gag aag acg gtg gtc ctg cag aaa aaa gac aat gag ggc	151
Ile Ile Glu Glu Lys Thr Val Val Leu Gln Lys Lys Asp Asn Glu Gly	
20 25 30 35	
ttt gga ttc gtg ctt cga ggg gcc aaa gct gac aca ccc att gaa gaa	199
Phe Gly Phe Val Leu Arg Gly Ala Lys Ala Asp Thr Pro Ile Glu Glu	
40 45 50	
ttc aca cca aca ccg gct ttc cca gcc cta cag tac ctg gag tcc gtg	247
Phe Thr Pro Thr Pro Ala Phe Pro Ala Leu Gln Tyr Leu Glu Ser Val	
55 60 65	
gat gaa ggt ggg gtg gcg tgg caa gcc gga cta agg acc ggg gac ttc	295
Asp Glu Gly Gly Val Ala Trp Gln Ala Gly Leu Arg Thr Gly Asp Phe	
70 75 80	
ttg att gag gtt aac aat gag aat gtt gtc aaa gtc ggc cac agg cag	343
Leu Ile Glu Val Asn Asn Glu Asn Val Val Lys Val Gly His Arg Gln	
85 90 95	
gtg gtg aac atg atc cgg cag gga ggg aat cac ctg gtc ctt aag gtg	391
Val Val Asn Met Ile Arg Gln Gly Gly Asn His Leu Val Leu Lys Val	
100 105 110 115	
gtc acg gtg acc agg aat ctg gac ccc gac gac acc gcc agg aag aaa	439
Val Thr Val Thr Arg Asn Leu Asp Pro Asp Asp Thr Ala Arg Lys Lys	
120 125 130	
gct ccc ccg cct cca aag cgg gca ccg acc aca gcc ctc acc ctg cgc	487
Ala Pro Pro Pro Pro Lys Arg Ala Pro Thr Thr Ala Leu Thr Leu Arg	
135 140 145	
tcc aag tcc atg acc tcg gag ctg gag gag ctc gtg gat aaa gcc tcg	535
Ser Lys Ser Met Thr Ser Glu Leu Glu Glu Leu Val Asp Lys Ala Ser	
150 155 160	
gtc cgg aag aag aag gat aaa ccc gag gag ata gtc ccg gcc tcc aag	583
Val Arg Lys Lys Lys Asp Lys Pro Glu Glu Ile Val Pro Ala Ser Lys	
165 170 175	
ccc tcc cgc gct gct gag aac atg gct gtg gaa ccg agg gtg gcg acc	631
Pro Ser Arg Ala Ala Glu Asn Met Ala Val Glu Pro Arg Val Ala Thr	
180 185 190 195	
atc aag cag cgg ccc agc agc cgg tgc ttc ccg gcg ggc tca gac atg	679
Ile Lys Gln Arg Pro Ser Ser Arg Cys Phe Pro Ala Gly Ser Asp Met	
200 205 210	
aac tct gtg tac gaa cgc caa gga atc gcc gtg atg acg ccc act gtt	727
Asn Ser Val Tyr Glu Arg Gln Gly Ile Ala Val Met Thr Pro Thr Val	
215 220 225	
cct ggg agc cca aaa gcc ccg ttt ctg ggc atc cct cga ggt acg atg	775
Pro Gly Ser Pro Lys Ala Pro Phe Leu Gly Ile Pro Arg Gly Thr Met	
230 235 240	
cga agg cag aaa tca ata gac agc aga atc ttt cta tca gga ata aca	823
Arg Arg Gln Lys Ser Ile Asp Ser Arg Ile Phe Leu Ser Gly Ile Thr	

245	250	255	
gag gaa gag cgg cag ttt	ctg gct cct cca atg	ctg aag ttc acc aga	871
Glu Glu Glu Arg Gln Phe	Leu Ala Pro Pro Met	Leu Lys Phe Thr Arg	
260	265	270	275
agc ctg tcc atg ccg gac acc tct gag gac atc ccc cct cca ccg cag			919
Ser Leu Ser Met Pro Asp Thr Ser Glu Asp Ile Pro Pro Pro Pro Gln			
	280	285	290
tct gtg ccc ccg tcc cca cca cca cct tcc cca acc act tac aac tgc			967
Ser Val Pro Pro Ser Pro Pro Pro Pro Ser Pro Thr Thr Tyr Asn Cys			
	295	300	305
ccc aag tcc cca act cca aga gtc tac ggg acg att aag cct gcg ttc			1015
Pro Lys Ser Pro Thr Pro Arg Val Tyr Gly Thr Ile Lys Pro Ala Phe			
	310	315	320
aat cag aat tct gcc gcc aag gtg tcc ccc gcc acc agg tcc gac acc			1063
Asn Gln Asn Ser Ala Ala Lys Val Ser Pro Ala Thr Arg Ser Asp Thr			
	325	330	335
gtg gcc acc atg atg agg gag aag ggg atg tac ttc agg aga gag ctg			1111
Val Ala Thr Met Met Arg Glu Lys Gly Met Tyr Phe Arg Arg Glu Leu			
	340	345	350
gac cgc tac tcc ttg gac tct gaa gac ctc tac agt cgg aat gcc ggc			1159
Asp Arg Tyr Ser Leu Asp Ser Glu Asp Leu Tyr Ser Arg Asn Ala Gly			
	360	365	370
ccg caa gcc aac ttc cgc aac aag aga ggc cag atg cca gaa aac cca			1207
Pro Gln Ala Asn Phe Arg Asn Lys Arg Gly Gln Met Pro Glu Asn Pro			
	375	380	385
tac tca gag gtg ggg aag atc gcc agc aaa gcc gtc tac gtc ccc gcc			1255
Tyr Ser Glu Val Gly Lys Ile Ala Ser Lys Ala Val Tyr Val Pro Ala			
	390	395	400
aag ccc gcc agg ccg aag ggg atg ctg gtg aag cag tcc aac gtg gag			1303
Lys Pro Ala Arg Arg Lys Gly Met Leu Val Lys Gln Ser Asn Val Glu			
	405	410	415
gac agc ccc gag aag acg tgc tcc atc cct atc ccg acc atc atc gtg			1351
Asp Ser Pro Glu Lys Thr Cys Ser Ile Pro Ile Pro Thr Ile Ile Val			
	420	425	430
aag gag ccg tcc acc agc agc agc ggc aag agc agc cag ggc agc agc			1399
Lys Glu Pro Ser Thr Ser Ser Ser Gly Lys Ser Ser Gln Gly Ser Ser			
	440	445	450
atg gag atc gac ccc cag gcc ccg gag cca ccg agc cag ctg ccg cct			1447
Met Glu Ile Asp Pro Gln Ala Pro Glu Pro Pro Ser Gln Leu Arg Pro			
	455	460	465
gac gaa agc ctg acc gtc agc agc ccc ttt gcc gcc gcc atc gcc gga			1495
Asp Glu Ser Leu Thr Val Ser Ser Pro Phe Ala Ala Ala Ile Ala Gly			
	470	475	480
gcc gtc cgc gac cgt gag aag ccg ctg gaa gcc agg agg aac tcc ccg			1543
Ala Val Arg Asp Arg Glu Lys Arg Leu Glu Ala Arg Arg Asn Ser Pro			
	485	490	495
gcc ttc ctc tcc aca gac ctg ggg gat gag gat gtg ggc ctg ggg cca			1591
Ala Phe Leu Ser Thr Asp Leu Gly Asp Glu Asp Val Gly Leu Gly Pro			

500	505	510	515	
ccc gcc ccc agg acg cgg ccc tcc atg ttc ccc gag gag ggg gat ttt Pro Ala Pro Arg Thr Arg Pro Ser Met Phe Pro Glu Glu Gly Asp Phe 520 525 530				1639
gct gac gag gac agc gct gag cag ctg tca tcc ccc atg ccg agt gcc Ala Asp Glu Asp Ser Ala Glu Gln Leu Ser Ser Pro Met Pro Ser Ala 535 540 545				1687
acg ccc agg gag ccc gaa aac cat ttc gtg ggt ggc gcc gag gcc agt Thr Pro Arg Glu Pro Glu Asn His Phe Val Gly Gly Ala Glu Ala Ser 550 555 560				1735
gct ccg ggt gag gct ggg agg ccg ctg aat tcc acg tcc aaa gcc cag Ala Pro Gly Glu Ala Gly Arg Pro Leu Asn Ser Thr Ser Lys Ala Gln 565 570 575				1783
ggg ccc gag agc agc cca gca gtg ccc tcc gcg agc agc ggc aca gcc Gly Pro Glu Ser Ser Pro Ala Val Pro Ser Ala Ser Ser Gly Thr Ala 580 585 590 595				1831
ggc ccc ggg aat tat gtc cac cca ctc aca ggg cgg ctg ctt gat ccc Gly Pro Gly Asn Tyr Val His Pro Leu Thr Gly Arg Leu Leu Asp Pro 600 605 610				1879
agc tcc ccg ctg gcc ctg gca ctc tcc gca agg gac cga gcc atg aag Ser Ser Pro Leu Ala Leu Ala Leu Ser Ala Arg Asp Arg Ala Met Lys 615 620 625				1927
gag tct caa cag gga ccc aaa ggg gag gcc ccc aag gcc gac ctc aac Glu Ser Gln Gln Gly Pro Lys Gly Glu Ala Pro Lys Ala Asp Leu Asn 630 635 640				1975
aaa cct ctt tac att gat acc aaa atg cgg ccc agc ctg gat gcc ggc Lys Pro Leu Tyr Ile Asp Thr Lys Met Arg Pro Ser Leu Asp Ala Gly 645 650 655				2023
ttc cct acg gtc acc agg cag aac acc cgg gga ccc ctg agg cgg cag Phe Pro Thr Val Thr Arg Gln Asn Thr Arg Gly Pro Leu Arg Arg Gln 660 665 670 675				2071
gag acg gag aac aag tac gag acc gac ctg ggc cga gac cgg aaa ggc Glu Thr Glu Asn Lys Tyr Glu Thr Asp Leu Gly Arg Asp Arg Lys Gly 680 685 690				2119
gat gac aag aag aac atg ctg atc gac atc atg gac acg tcc cag cag Asp Asp Lys Lys Asn Met Leu Ile Asp Ile Met Asp Thr Ser Gln Gln 695 700 705				2167
aag tcg gct ggc ctg ctg atg gtg cac acc gtg gac gcc act aag ctg Lys Ser Ala Gly Leu Leu Met Val His Thr Val Asp Ala Thr Lys Leu 710 715 720				2215
gac aac gcc ctg cag gaa gag gac gag aag gca gag gtg gag atg aag Asp Asn Ala Leu Gln Glu Glu Asp Glu Lys Ala Glu Val Glu Met Lys 725 730 735				2263
cca gac agc tcg ccg tcc gag gtg cca gaa ggt gtt tcc gaa acc gaa Pro Asp Ser Ser Pro Ser Glu Val Pro Glu Gly Val Ser Glu Thr Glu 740 745 750 755				2311
ggt gct tta cag atc tcc gct gcc ccc gag ccc acc acc gtg ccc ggc Gly Ala Leu Gln Ile Ser Ala Ala Pro Glu Pro Thr Thr Val Pro Gly 755 760 765				2359

2549

1015	1020	1025	
tct atc cta cag caa atg aac cga gag aaa ttg gca aag ccg ggg gaa Ser Ile Leu Gln Gln Met Asn Arg Glu Lys Leu Ala Lys Pro Gly Glu 1030 1035 1040			3175
gga ctg gat tca cca atg gga gcc aag tcc gcc agc ctc gct cca aga Gly Leu Asp Ser Pro Met Gly Ala Lys Ser Ala Ser Leu Ala Pro Arg 1045 1050 1055			3223
agc ccg gag atc atg agc acc atc tca ggt aca cgg agc acg acg gtc Ser Pro Glu Ile Met Ser Thr Ile Ser Gly Thr Arg Ser Thr Thr Val 1060 1065 1070 1075			3271
acc ttc act gtt cgc ccc ggc acc tcc cag ccc atc acc ctg cag agc Thr Phe Thr Val Arg Pro Gly Thr Ser Gln Pro Ile Thr Leu Gln Ser 1080 1085 1090			3319
cgg ccc ccc gac tat gaa agc agg acc tca gga aca aga cgt gcc cca Arg Pro Pro Asp Tyr Glu Ser Arg Thr Ser Gly Thr Arg Arg Ala Pro 1095 1100 1105			3367
agc cct gtg gtc tcg cca aca gag atg aac aaa gag acc ctg ccc gcc Ser Pro Val Val Ser Pro Thr Glu Met Asn Lys Glu Thr Leu Pro Ala 1110 1115 1120			3415
ccc ctg tct gct gcc acc gcc tct cct tct ccc gct ctc tca gat gtc Pro Leu Ser Ala Ala Thr Ala Ser Pro Ser Pro Ala Leu Ser Asp Val 1125 1130 1135			3463
ttt agc ctt cca agc cag ccc cct tct ggg gat cta ttt ggc ttg aac Phe Ser Leu Pro Ser Gln Pro Pro Ser Gly Asp Leu Phe Gly Leu Asn 1140 1145 1150 1155			3511
cca gcg gga cgc agt agg tcg cca tcc ccc tcg ata ctg caa cag cca Pro Ala Gly Arg Ser Arg Ser Pro Ser Pro Ser Ile Leu Gln Gln Pro 1160 1165 1170			3559
atc tca aat aag cct ttt aca act aaa cct gtc cac ctg tgg act aaa Ile Ser Asn Lys Pro Phe Thr Thr Lys Pro Val His Leu Trp Thr Lys 1175 1180 1185			3607
cca gat gtg gcc gat tgg ctg gaa agt cta aac ttg ggt gaa cat aaa Pro Asp Val Ala Asp Trp Leu Glu Ser Leu Asn Leu Gly Glu His Lys 1190 1195 1200			3655
gag gcc ttc atg gac aat gag atc gat ggc agt cac tta cca aac ctg Glu Ala Phe Met Asp Asn Glu Ile Asp Gly Ser His Leu Pro Asn Leu 1205 1210 1215			3703
cag aag gag gac ctc atc gat ctt ggg gta act cga gtc ggg cac aga Gln Lys Glu Asp Leu Ile Asp Leu Gly Val Thr Arg Val Gly His Arg 1220 1225 1230 1235			3751
atg aac ata gaa agg gct ttg aaa cag ctg ctg gac aga taa ggacggc Met Asn Ile Glu Arg Ala Leu Lys Gln Leu Leu Asp Arg *	1240	1245	3800
tgctctccac ctgcagact gctcttgta taagtagaga tgggctcgtg ctgaaacatc			3860
tgaatgccaa gcgaagtctg tgagcatcaa ccccaactcca tgggtttgtc tcttggtacc			3920
caaagaaata ctgagttgtg tccacaacat ggctgggtct tcagaccctt ggctcaccat			3980

gtgggtgtct tgggcagttt ctatcacaca tgggacaagg ggagggagtt tttctaacaat 4040
ggaaaaagat tcccagcctg cggcccagca tgcaggtggc ctgcctttgc cgggtccgtg 4100
aggctccccg tcaattttgc acgggatcct agctcttgta ggcagacacc agtgcaactct 4160
agatacctcc tgagacctcc gtccctctgt ttccgggcag ctctcaccac cccaggcccc 4220
ggcatgaggc ctttcctcag tcctgtggcc tctcagagga cacctgatgc tcacctgccc 4280
ctctttctcc tgcacttggc ttgcagttag atgctcccag atgcatttgt ccagtgcccc 4340
atcatgggccc tgaaaggcag agaaactttt tctacacag attcttttcc ccatctcttc 4400
ctgtggtttg catccatggc tctttggcca tgaggttcct ggcagtgtg ggagtttgga 4460
tgggatcgtg cccagctttg cttagctttc tttatttctg caaatctgtt agcataattc 4520
caagggtggc aagcagatgt cacatggagt tagtcaaagc acaaagtac gattccacaa 4580
tggaggggag acctggccaa gggagccagc cagcgtgcaa ctgccaagc tccaggtctc 4640
caggacaaga gcagttgtct gccatgagca cccatccagg atggagaata agggcttctc 4700
tgccctcag aattcttttt aattgaagat gtcttgagct ctgcaaagat cagagcaggt 4760
gagcatccac tttgacatga aggacaagaa gacgcatggc tcatggcggg cacatgcggc 4820
tgccagttag acagcgtctc ctctgggagc tgggcgggca cagcatcctc agttctgtgc 4880
ccagccaagg gtgagcatct ctgctgagac agtccttttg ctctcggagg ccagggaaga 4940
tggtagcttag aggtcttttc cctatcgtct tgggtgtcta ggaatccac cagcttgtct 5000
taacagtaca acagcttctt tgaggacca gtgggtatgg agtatagaca gaaccagggt 5060
ttgagaacag aaggtgggct gcaggatcag agtgaaagca gaggcgtgag gagaggaaa 5120
caggaggtc tcctgggctg ccaggtcagc ctctctggca aggtcttctt gagccccgcc 5180
cctttcttcc cccggagtcc ctccaccca taacaatacc tcgaatttcc aaaagaggtc 5240
accagatgca catgggccgc aaaacacaca gtcaggcttc cagcacattc tccccattt 5300
ggaggatact cgaatgtcag gtttttggtt ttattattat ttcagaacta gctcagccca 5360
tctctaatta taaaacatgg ttttggtttt ttttttctct tttttcttg attaggtctg 5420
gaacagctct agaatgaaca cataaaattt agcaatttaa aatctttctt tactgcaagt 5480
ttaaatagtt gtacagatag ttataagca caatatttta agaaaaaaa gtggctggtc 5540
tactaggcag cctttgtgcc acttcagtgc tagaaagtta aagaaaaaaa aacttttgtg 5600
atttaataat actatttctg tggaataatt ataaaagtat gaccttttta aatcaacctt 5660
atttggatgc atctgaacca gcagagctgt gttatatatt ctatctttgc tagaacttcg 5720
tcattgaagg acaatttctt caaagtgggt acaattcata atgcagcagt ttctccaaaa 5780
acaaaaacaa aacacacacc acacacacgc gcttttccag tcacacaccc ctgatgttgg 5840
aaccaagttt ttggaccttc tgttccaaaa ccttttgcag gtcaatcttt gtatttgaaa 5900

```

tgatccaatc caacttgaag tcaattgaat attaaggcgc tttacttccg tgtgctttca 5960
gtttttccat catgagatga atgagcatta ctctagataa atttcaagac aggatactac 6020
agggtggcctg ctgaggctgc cccatatttt agaaaatgta aaaatgggtg tttggccatt 6080
aatttgtctt ccatttgatg ataccgcaaa attccgtgag tccattcctt tggcatggca 6140
ctttccctgg gcctacagtt ggtattacct ctgtgctcag tgccaggcaa aacactagct 6200
caaaggagag tcaaggaaac cgctggcaga cgataaccag tcgaaactcg tgacttcggt 6260
ttgttgaact ttggcagcca gttggtgagg gccagatggt attccctttc ttaaagatac 6320
tccaagccac atgccactaa ccacaagcaa gctggctgca agactaaaga gctgacaaca 6380
tagtttattt ttacactgtc ttattataga gaagtaatag acctatcaga acctgcactg 6440
accaacaaat aacacatgt tgccaagatg aatcggctct tatctctatc tgcttatttt 6500
ggtactgaaa gcaatagttc ctcatc aaa tcaccaccca ctgttctccc cctttgggac 6560
atgttaggac gaggccctat tccatgcccc tctttaatgg tggaacaaat gttaaactgc 6620
tcacttaaag atcatgttga tattattcca ggttttaaga tcaacttttg ttacatactg 6680
taatttaa at aaactgcatt tacatgccta gtttctgtaa tattgtgtat acaaaaccca 6740
aatctctcaa aatgtaaatt atgtatacct gccaaagatac cttttccagg gtgtctgcgc 6800
acattttaag ttaattcaca taatataaaa attactcaat gtgactgttg atttgcgtgaa 6860
ctttacatat cacaaagtga attatttgtg atactttagt taataaaatg gtaaattttt 6920
ttctcagtta ttgaacaagc aagcattatc cagttgatct ggcaatgact ttttgtgtgt 6980
gggcacaa at attgattttc ccattaacaa tttttttttg ttttttaaat actaatatgt 7040
ttcacactat agtttgtgta acaacacgtg ttcgcattat ctatgttgct gttacttttg 7100
tgcttttatt ctttttagac tttataaaaa aaaaaaa 7137

```

```

<210> 919
<211> 2212
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> CDS
<222> (227) .. (1291)

```

```

<400> 919
aatactttat aagtgaaata ttacttgaat cctttgagat gttacaagtt ttttttttcc 60
ttgagtcatg ctaatagatg gttcaataca tgaatgagtc ccttgctgaa atgcttttagg 120
acttcagact accctgaacg ttgattactc tttatactga aataggcatt attcagtgga 180
agagaggggaa gaccaaattg atagactgga ctttattcga aaccag atg aac ctt 235
Met Asn Leu

```

tta aca ctg gat gtt aag aaa aaa atc aag gag gtt acc gag gag gtg Leu Thr Leu Asp Val Lys Lys Lys Ile Lys Glu Val Thr Glu Glu Val 5 10 15	283
gca aac aaa gtt tca tgt gca atg aca gat gaa att tgt cga ctg tct Ala Asn Lys Val Ser Cys Ala Met Thr Asp Glu Ile Cys Arg Leu Ser 20 25 30 35	331
gtt ttg gtt gat gaa ttt tgt tca gag ttt cat cct aat cca gat gta Val Leu Val Asp Glu Phe Cys Ser Glu Phe His Pro Asn Pro Asp Val 40 45 50	379
tta aaa ata tat aaa agt gaa tta aat aag cac ata gag gat ggt atg Leu Lys Ile Tyr Lys Ser Glu Leu Asn Lys His Ile Glu Asp Gly Met 55 60 65	427
gga aga aat ttg gct gat cga tgc acc gat gaa gta aac gcc tta gtg Gly Arg Asn Leu Ala Asp Arg Cys Thr Asp Glu Val Asn Ala Leu Val 70 75 80	475
ctt cag acc cag caa gaa att att gaa aat ttg aag cca tta ctt cca Leu Gln Thr Gln Gln Glu Ile Ile Glu Asn Leu Lys Pro Leu Leu Pro 85 90 95	523
gct ggt ata cag gat aaa cta cat aca ctg atc cct tgc aag aaa ttt Ala Gly Ile Gln Asp Lys Leu His Thr Leu Ile Pro Cys Lys Lys Phe 100 105 110 115	571
gat ctc agt tat aat cta aat tac cac aag tta tgt tca gat ttt caa Asp Leu Ser Tyr Asn Leu Asn Tyr His Lys Leu Cys Ser Asp Phe Gln 120 125 130	619
gag gat att gta ttt cgt ttt tcc ctg ggc tgg tct tcc ctt gta cat Glu Asp Ile Val Phe Arg Phe Ser Leu Gly Trp Ser Ser Leu Val His 135 140 145	667
cga ttt ttg ggc cct aga aat gct caa agg gtg ctc cta gga tta tca Arg Phe Leu Gly Pro Arg Asn Ala Gln Arg Val Leu Leu Gly Leu Ser 150 155 160	715
gag cct atc ttt cag ctc cct aga tct tta gct tct act ccc act gct Glu Pro Ile Phe Gln Leu Pro Arg Ser Leu Ala Ser Thr Pro Thr Ala 165 170 175	763
cct acc act cca gca acg cca gat aat gca tca cag gaa gaa ctc atg Pro Thr Thr Pro Ala Thr Pro Asp Asn Ala Ser Gln Glu Glu Leu Met 180 185 190 195	811
att aca tta gta aca gga ttg gcg tcc gtt aca tct aga act tct atg Ile Thr Leu Val Thr Gly Leu Ala Ser Val Thr Ser Arg Thr Ser Met 200 205 210	859
ggc atc att att gtt gga gga gtg att tgg aaa act ata ggc tgg aaa Gly Ile Ile Ile Val Gly Gly Val Ile Trp Lys Thr Ile Gly Trp Lys 215 220 225	907
ctc cta tct gtt tca tta act atg tat gga gct ttg tat ctt tat gaa Leu Leu Ser Val Ser Leu Thr Met Tyr Gly Ala Leu Tyr Leu Tyr Glu 230 235 240	955
aga ctg agc tgg acc acc cat gcc aag gag cga gcc ttt aaa cag cag Arg Leu Ser Trp Thr Thr His Ala Lys Glu Arg Ala Phe Lys Gln Gln 245 250 255	1003

```

ttt gta aac tat gca act gaa aaa ctg agg atg att gtt agc tcc acg      1051
Phe Val Asn Tyr Ala Thr Glu Lys Leu Arg Met Ile Val Ser Ser Thr
260                               265                               270                               275

agt gca aac tgc agt cac caa gta aaa caa caa ata gct acc act ttt      1099
Ser Ala Asn Cys Ser His Gln Val Lys Gln Gln Ile Ala Thr Thr Phe
280                               285                               290

gct cgc ctg tgc caa caa gtt gat att act caa aaa cag ctg gaa gaa      1147
Ala Arg Leu Cys Gln Gln Val Asp Ile Thr Gln Lys Gln Leu Glu Glu
295                               300                               305

gaa att gct aga tta ccc aaa gaa ata gat cag ttg gag aaa ata caa      1195
Glu Ile Ala Arg Leu Pro Lys Glu Ile Asp Gln Leu Glu Lys Ile Gln
310                               315                               320

aac aat tca aag ctc tta aga aat aaa gct gtt caa ctt gaa aat gag      1243
Asn Asn Ser Lys Leu Leu Arg Asn Lys Ala Val Gln Leu Glu Asn Glu
325                               330                               335

ctg gag aat ttt act aag cag ttt cta cct tca agc aat gaa gaa tcc      1291
Leu Glu Asn Phe Thr Lys Gln Phe Leu Pro Ser Ser Asn Glu Glu Ser
340                               345                               350                               355

taacaataga gattgctttg gtgaccatga taggaggaaa cgaaacttgt aagattggaa      1351

cagttgttat ttttatgaaa ttactttaaa tatgaattgt actaactgta cctaaatagc      1411

aaagccctgt gtagattctg gtaatgatct gtctcagggt atgtgtattt ttgaagagtg      1471

ttatgtcctt agttttaatt ttgagtaaag aaaaggctaa aatcatgaat tagttacaag      1531

caacagtacc aacttatgtg acccctgagg ggtggggctg tgagctctta atttgttttt      1591

gattctgaaa aactctgctt cctggcatcc aggagttaga gattgagcct ttcattctct      1651

ttctcaaaac tagtttttga tgctttcttt catgggaata gtcacttttt tatttagtaa      1711

atcgcatgtc tggaaccacc aaggagtgtg gaatgtcctt gagtgtatta tttatgcaag      1771

tcacagtcac gttgccatca tggcagctat gtgaaacact aataaatgtg tttttacttt      1831

ttattcccg taaaactgat gtaaaacagg ataaaggctt gttatagtca cttataagta      1891

tctgggtcta agtaatttcc ttagatgttt ctaaagaaac attttcagct ttgctcccat      1951

tatgattcca ataaggaacg ctttcctagt gcaattttag gagtaaagtt tgaagagata      2011

aaaatagcca aagataggag acgtctgaat tttgaatgat aaacagtgat gttttaaaaa      2071

ggctgttggt cttcaggagg catttgcccta ggatattgct ggattatacc ccattggagg      2131

cttttaattt tatttgtatg aattttccag gatttcatta aaaattatta ttgtattttt      2191

taccttaaaa aaaaaaaaaa a                                             2212

```

<210> 920

<211> 2083

<212> DNA

<213> Homo sapiens

<220>
 <221> CDS
 <222> (748) .. (1482)

<400> 920
 acagttaatc aactggccca tgcccttcac atggacaaag atttgaaagc tggctgtctt 60
 gtacgtgtgt tttgccccaa agcaaaatgt gccctcttga gagatgacct ggtgttagta 120
 gacagtccag gcacagatgt cactacagag ctggatagct ggattgataa gttttgccta 180
 gatgctgatg tctttgtttt ggtcgcaaac tctgaatcaa cactaatgaa tacggaaaaa 240
 cacttttttc acaaggtgaa tgagcggctt tccaagccta atattttcat tctcaataat 300
 cgttgggatg cctctgcac agagccagaa tatatggaag acgtacgcag acagcacatg 360
 gaaagatgcc tgcatttctt ggtggaggag ctcaaagttg taaatgcttt agaagcacag 420
 aatcgatatc tctttgtttc agcaaaggaa gttcttagtg ctagaaagca aaaagcacag 480
 gggatgccag aaagtgggtg ggcacttgct gaaggatttc atgcaagatt acaggaattt 540
 cagaattttg aacaaatctt tgaggagtgt atctcgagc cagcagtga aacaaagttc 600
 gaacagcaca ctatcagagc taaacagata ctagctactg tgaaaaacat aatggattca 660
 gtaaacctgg cagctgaaga taaaaggcat tattcagtgg aagagaggga agaccaaatt 720
 gatagactgg actttattcg aaaccag atg aac ctt tta aca ctg gat gtt 771
 Met Asn Leu Leu Thr Leu Asp Val
 1 5
 aag aaa aaa atc aag gag gtt acc gag gag gtg cca aac aaa gtt tca 819
 Lys Lys Lys Ile Lys Glu Val Thr Glu Glu Val Pro Asn Lys Val Ser
 10 15 20
 tgt gca atg aca gat gaa att tgt cga ctg tct gtt ttg gtt gat gaa 867
 Cys Ala Met Thr Asp Glu Ile Cys Arg Leu Ser Val Leu Val Asp Glu
 25 30 35 40
 ttt tgt tca gag ttt cat cct aat cca gat gta tta aaa ata tat aaa 915
 Phe Cys Ser Glu Phe His Pro Asn Pro Asp Val Leu Lys Ile Tyr Lys
 45 50 55
 agt ctc cct aga tct tta gct tct act ccc act gct cct acc act cca 963
 Ser Leu Pro Arg Ser Leu Ala Ser Thr Pro Thr Ala Pro Thr Thr Pro
 60 65 70
 gca acg cca gat aat gca tca cag gaa gaa ctc atg att aca tta gta 1011
 Ala Thr Pro Asp Asn Ala Ser Gln Glu Glu Leu Met Ile Thr Leu Val
 75 80 85
 aca gga ttg gcg tcc gtt aca tct aga act tct atg ggc atc att att 1059
 Thr Gly Leu Ala Ser Val Thr Ser Arg Thr Ser Met Gly Ile Ile Ile
 90 95 100
 gtt gga gga gtg att tgg aaa act ata ggc tgg aaa ctc cta tct gtt 1107
 Val Gly Gly Val Ile Trp Lys Thr Ile Gly Trp Lys Leu Leu Ser Val
 105 110 115 120
 tca tta act atg tat gga gct ttg tat ctt tat gaa aga ctg agc tgg 1155
 Ser Leu Thr Met Tyr Gly Ala Leu Tyr Leu Tyr Glu Arg Leu Ser Trp

	125	130	135	
acc acc cat gcc aag gag cga gcc ttt aaa cag cag ttt gta aac tat				1203
Thr Thr His Ala Lys Glu Arg Ala Phe Lys Gln Gln Phe Val Asn Tyr				
	140	145	150	
gca act gaa aaa ctg agg atg att gtt agc tcc acg agt gca aac tgc				1251
Ala Thr Glu Lys Leu Arg Met Ile Val Ser Ser Thr Ser Ala Asn Cys				
	155	160	165	
agt cac caa gta aaa caa caa ata gct acc act ttt gct cgc ctg tgc				1299
Ser His Gln Val Lys Gln Gln Ile Ala Thr Thr Phe Ala Arg Leu Cys				
	170	175	180	
caa caa gtt gat att acc cac aaa cag ctg gaa gaa gaa att gct aga				1347
Gln Gln Val Asp Ile Thr His Lys Gln Leu Glu Glu Glu Ile Ala Arg				
	185	190	195	200
tta ccc aaa gaa ata gat cag ttg gag aaa atc caa aac aat tca aag				1395
Leu Pro Lys Glu Ile Asp Gln Leu Glu Lys Ile Gln Asn Asn Ser Lys				
	205	210	215	
ctc tta aga aat aaa gct gtt caa ctt gaa aat gag ctg gag aat ttt				1443
Leu Leu Arg Asn Lys Ala Val Gln Leu Glu Asn Glu Leu Glu Asn Phe				
	220	225	230	
act aag cag ttt cta cct tca agc aat gaa gaa tcc taa caatagagat				1492
Thr Lys Gln Phe Leu Pro Ser Ser Asn Glu Glu Ser *				
	235	240	245	
tgctttggtg accatgatag gaggaacga aacttgtaag attggaacag ttgttatttt				1552
tatgaaatta ctttaaatat gaattgtact atctgtacct aaatagcaaa gccctgtgta				1612
gattctggta atgatctgtc tcagggtatg tgtatttttg aagagtgtta tgtccttagt				1672
tttaattttg agtaaagaaa aggctaaaat catgaattag ttacaagcaa cagtaccaac				1732
ttatgtgacc cctgaggggt ggggctgtga gctcttaatt tgtttttgat tctgaaaaac				1792
tctgcttctt gccatccagg agttagagat tgagcctttc atcttctttc tcaacactag				1852
tttttgatgc tttctttcat gggaaatagtc acttttttat ttagtaaato gcattgtggt				1912
aaccacccca aggagtgtgg aatgtccttg agtgtattat ttatgcaagt cacagtcacg				1972
ttgccatcat ggcagctatg tgaaacacta ataaatgtgt ttttactttt tattcccgtt				2032
aaaactgatg taaaacagga taaaggcttg ttatagtcaa aaaaaaaaaa a				2083

<210> 921
 <211> 3231
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (331) .. (1158)

<400> 921
 gcacgagtgg acttgtggtg cgtgtccagg gctccgcagc gttgccggtt gtattcgctg 60

gataccagag	ggcggaagtg	cagcagggtt	cagctccgac	ctccgcgccg	gtgctttttg		120
cggctgcgcg	ggcttcctgg	agtccctgcta	ccgcgtcccc	gcaggacagt	gtgtcaggcg		180
ggcagcttg	cccgcgcgcc	caccggagcg	cggaatctgg	gcgtccccac	cagtgcgggg		240
agccggaagg	aggagccata	gcttgaggta	ggtttggtt	tggttgaaat	aagaatttag		300
cctgtatgta	ctgctttaac	tcctggaaga		atg aca gat gac aaa gat gtg Met Thr Asp Asp Lys Asp Val			351
				1	5		
ctt cga gat	gtg tgg ttt	gga cga att	cca act tgt	ttc acg cta tat			399
Leu Arg Asp	Val Trp Phe	Gly Arg Ile	Pro Thr Cys	Phe Thr Leu Tyr			
	10	15		20			
cag gat gag	ata act gaa	agg gaa gca	gaa cca tac	tat ttg ctt ttg			447
Gln Asp Glu	Ile Thr Glu	Arg Glu Ala	Glu Pro Tyr	Tyr Leu Leu Leu			
	25	30	35				
cca aga gta	agt tat ttg	acg ttg gta	act gac aaa	gtg aaa aag cac			495
Pro Arg Val	Ser Tyr Leu	Thr Leu Val	Thr Asp Lys	Val Lys Lys His			
	40	45	50	55			
ttt cag aag	gtt atg aga	caa gaa gac	att agt gag	ata tgg ttt gaa			543
Phe Gln Lys	Val Met Arg	Gln Glu Asp	Ile Ser Glu	Ile Trp Phe Glu			
	60	65	70				
tat gaa ggc	aca cca ctg	aaa tgg cat	tat cca att	ggt ttg cta ttt			591
Tyr Glu Gly	Thr Pro Leu	Lys Trp His	Tyr Pro Ile	Gly Leu Leu Phe			
	75	80	85				
gat ctt ctt	gca tca agt	tca gct ctt	cct tgg aac	atc aca gta cat			639
Asp Leu Leu	Ala Ser Ser	Ser Ala Leu	Pro Trp Asn	Ile Thr Val His			
	90	95	100				
ttt aag agt	ttt cca gaa	aaa gac ctt	ctg cac tgt	cca tct aag gat			687
Phe Lys Ser	Phe Pro Glu	Lys Asp Leu	Leu His Cys	Pro Ser Lys Asp			
	105	110	115				
gca att gaa	gct cat ttt	atg tca tgt	atg aaa gaa	gct gat gct tta			735
Ala Ile Glu	Ala His Phe	Met Ser Cys	Met Lys Glu	Ala Asp Ala Leu			
	120	125	130	135			
aaa cat aaa	agt caa gta	atc aat gaa	atg cag aaa	aaa gat cac aag			783
Lys His Lys	Ser Gln Val	Ile Asn Glu	Met Gln Lys	Lys Asp His Lys			
	140	145	150				
caa ctc tgg	atg gga ttg	caa aat gac	aga ttt gac	cag ttt tgg gcc			831
Gln Leu Trp	Met Gly Leu	Gln Asn Asp	Arg Phe Asp	Gln Phe Trp Ala			
	155	160	165				
atc aat cgg	aaa ctc atg	gaa gaa tat	cct gca gaa	gaa aat gga ttt	cgt		879
Ile Asn Arg	Lys Leu Met	Glu Tyr Pro	Ala Ala Glu	Glu Asn Gly Phe	Arg		
	170	175	180				
tat atc ccc	ttt aga ata	tat cag aca	acg act gaa	aga cct ttc att			927
Tyr Ile Pro	Phe Arg Ile	Tyr Gln Thr	Thr Thr Thr	Glu Arg Pro Phe	Ile		
	185	190	195				
cag aag ctg	ttt cgt cct	gtg gct gca	gat gga cag	ttg cac aca cta			975
Gln Lys Leu	Phe Arg Pro	Val Ala Ala	Asp Gly Gln	Leu His Thr Leu			
	200	205	210	215			

gga gat ctc ctc aaa gaa gtt tgt cct tct gct att gat cct gaa gat 1023
 Gly Asp Leu Leu Lys Glu Val Cys Pro Ser Ala Ile Asp Pro Glu Asp
 220 225 230

ggg gaa aaa aag aat caa gtg atg att cat gga att gag cca atg ttg 1071
 Gly Glu Lys Lys Asn Gln Val Met Ile His Gly Ile Glu Pro Met Leu
 235 240 245

gaa aca cct ctg cag tgg ctg agt gaa cat ctg agc tac ccg gat aat 1119
 Glu Thr Pro Leu Gln Trp Leu Ser Glu His Leu Ser Tyr Pro Asp Asn
 250 255 260

ttt ctt cat att agt atc atc cca cag cca aca gat tga aggatcaact 1168
 Phe Leu His Ile Ser Ile Ile Pro Gln Pro Thr Asp *
 265 270 275

atttgacctga acagaatcat ccttaaattg gatttatcag agcatgtcac ccttttgctt 1228
 caatcagggtt tgggtggaggc aacctgacca gaaacacttc gctgctgcaa gccagacagg 1288
 aaaaagattc catgtcagat aaggcaactg ggctgggtctt actttgcatc acctctgctt 1348
 tcctccactg ccatcattaa acctcagctg tgacatgaaa gacttaccgg accactgaag 1408
 gtcttctgta aaatataatg aagctgaaac ctttggccta agaagaaaat ggaagtatgt 1468
 gccactcgat ttgtatttct gattaacaaa taaacagggg tatttcctaa ggtgaccatg 1528
 gttgaacttt agctcatgaa agtggaaca ttgggtttaat tttcaagaga attaagaaag 1588
 taaaagagaa attctgttat caataacttg caagtaattt tttgtaaaag attgaattac 1648
 agtaaaccca tctttcctta acgaaaattt cctatgttta cagtctgtct attggtatgc 1708
 aatcttgtaa ctttgataat gaacagttag agatttttaa ataaagcctc taaatatgtt 1768
 ttgtcattta ataacatata gttttgtcac ttttcaagta ctttctgact cacatacagt 1828
 agatcacttt ttactctgtg ttaccatttt gactggctgt cattggcatg ggggtggatat 1888
 agggcatagg attacttgct tcagaagctg tcatagaatt tcttgctgcc aattaaaaaa 1948
 cctgtgttct ttacacacta cacgtataaa tattgtaact gttcatcttt gttgttttat 2008
 cactgtaagc ctgtcaaata atagtatcct aagcatctgt aaatgctaatt tttgcatttt 2068
 tggaaaaacc cattccttcc aagctagtgt ttttcattgg ctccaggtct aatttttcac 2128
 tgtggctcct ggcagccagt cttttgaagt ttaaagatta cctgtctctt gactgcagta 2188
 ccttttcttt aatttttacc aaaaatatcc agaggttact ggagtcttta ttcaatataa 2248
 ggaaagtgtg ctgcacttta ttaccaagcc tctgggattt taccagtcaa acatatttgt 2308
 gcattacatt tcattttctg tgagctagct ggctgtccat attgaatgtt gaccatttgt 2368
 agtacgctaa aaggcttaca gtatcagaca cgatcatggg ttttagatccc ataataaaaa 2428
 tgaatgtttt tcttataaaa aattatacaa atgctgaagt gagattctac tattgttcat 2488
 tgcttccttt tcttttctct tttgcgattt tctactgatta atagcacatt tcttcacaaa 2548
 attagataaa gttgggtcaaa gaccagatat tctggaatgg aaattgtaaa gcttaatcaa 2608

```

aaagaatagc cagtacagca tacaatctca gaaacttaga agcaagtaga aaataattgg 2668
ttgatgtaaa cgaaagtgcc attttagtaa aggcaggaaa aaaatagcaa tatttgagtt 2728
atgtaaggat aaaaaatcca ctgacttgta tttttgcaca agaggctggg ctgaatatga 2788
ttgttcacat taagagtgtt tattcgtcgg ttcatttttg ggattttccc ccttgatgtt 2848
ttgacagatt gaagtgagct ttagtgagca aaaggatcag aatgcaggga acactaagct 2908
gtgatgaaga aagtgtggta aaaagccaga gtagttttat acagacaaaa ccagtgtcag 2968
gcctttgcag taggcttgag tgaacttctg atctagattt gaaagtaa at tttatgaaga 3028
cattgcccat ttttacttcc tcattcatta ttgtaccagc atcatagctt tattactcta 3088
atcccaggta agtcaagcct acaatgccct agaggaagag taaaaccaga aattcatgct 3148
ggcttaaata atctattttt gtttcttttc atttgaatat ttaaatttta tggtttatta 3208
aaaaattaaa taaaaaaaaa aaa 3231

```

<210> 922
 <211> 1073
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (337) .. (720)

```

<400> 922
accacatata tacccaactt ttatttgtca attacacttt aataaagctg ggggaagcca 60
ctctttttttt gggcacagca tccggctttt atttactaac tttgagaaca gagtaccttg 120
atcaattaaa tggtagggag cgctgtggag acagcatcct cccagtcgg ggaagagagg 180
cctaggatgc ctggggccca gcggcctctt cctcctggc gtccccgggt gccctcgctc 240
ccaggccccg cagtctcatt tgccgcttcc gacgcgtgac cccggcgcgc tagcgtccgg 300
gaccggtgac aggcgcgggg tgccccaagc agtccc atg tgt ccc ctc cct ctc 354
                               Met Cys Pro Leu Pro Leu
                               1 5

gca gcc gcc gca gtc gct gcg ccc cga gcc cct ctc cgg ctc ctc aac 402
Ala Ala Ala Ala Val Ala Ala Pro Arg Ala Pro Leu Arg Leu Leu Asn
          10          15          20

aga ggg ctc gcc gcc gcc atg tct acc gcc cag tca ctc aaa tcc gtg 450
Arg Gly Leu Ala Ala Ala Met Ser Thr Ala Gln Ser Leu Lys Ser Val
          25          30          35

gac tac gag gtg ttc gga aga gtg cag ggt gtt tgc ttc aga atg tat 498
Asp Tyr Glu Val Phe Gly Arg Val Gln Gly Val Cys Phe Arg Met Tyr
          40          45          50

aca gaa gat gaa gct agg aaa ata gga gtg gtt ggc tgg gtg aag aat 546
Thr Glu Asp Glu Ala Arg Lys Ile Gly Val Val Gly Trp Val Lys Asn

```

55	60	65	70	
acc agc aaa ggc acc gtg aca ggc caa gtg cag ggg cca gaa gac aaa				594
Thr Ser Lys Gly Thr Val Thr Gly Gln Val Gln Gly Pro Glu Asp Lys				
	75	80	85	
gtc aat tcc atg aag tcc tgg ctg agc aag gtt gga agc cct agt tct				642
Val Asn Ser Met Lys Ser Trp Leu Ser Lys Val Gly Ser Pro Ser Ser				
	90	95	100	
cgc att gac cgc aca aac ttt tct aat gaa aaa acc atc tct aag ctt				690
Arg Ile Asp Arg Thr Asn Phe Ser Asn Glu Lys Thr Ile Ser Lys Leu				
	105	110	115	
gaa tac tct aat ttt agt att aga tac taa t agaagagaaa aattgtaaca				741
Glu Tyr Ser Asn Phe Ser Ile Arg Tyr *				
	120	125		
cactgaacaa tagatactgt atgttcttaa gactatgtat actagaataa tagtagcaga				801
gtagggtgaa aaggaaacttt ctgttctgaa agctaagcga ctgtacgtgc tactaaaaat				861
gtctgacact gaaataaattt tactcaacta tgttttcaac aagcaaaaat atagtattct				921
aagattaaaaa tgtcattaca aaatatttag tgtgaacatt taatttaaac ttgtctcatg				981
gaatcttttaa tttcaatgaa cattacagca tatatatgtt atttggcgag acatcaaata				1041
aagttaacca tttaaaaatt aaaaaaaaaa aa				1073

<210> 923
 <211> 1246
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (218)..(1078)

<400> 923	
at ttggccct cgaggccaag aattcggcac gagcacggaa atgaaagtgg aagcaaacag	60
cctgcgagca gagcctcctg aggtgtattt cgggtcttgc tggggctgag agagaccaca	120
gccctttggg gggtaaaac aagagttcag ttgctgtgaa ttctgccact gtgccagct	180
ctgaagcctc agctcttgcc aaacagaccc gagaccc atg tca gcc cca ctg gat	235
	Met Ser Ala Pro Leu Asp
	1 5
gcc gcc ctc cac gcc ctt cag gag gag cag gcc aga ctc aag atg agg	283
Ala Ala Leu His Ala Leu Gln Glu Gln Ala Arg Leu Lys Met Arg	
	10 15 20
ctg tgg gac ctg cag cag ctg aga aag gag ctc ggg gac tcc ccc aaa	331
Leu Trp Asp Leu Gln Gln Leu Arg Lys Glu Leu Gly Asp Ser Pro Lys	
	25 30 35
gac aag gtc cca ttt tca gtg ccc aag atc ccc ctg gta ttc cga gga	379
Asp Lys Val Pro Phe Ser Val Pro Lys Ile Pro Leu Val Phe Arg Gly	
	40 45 50

cac acc cag cag gac ccg gaa gtg cct aag tct tta gtt tcc aat ttg	427
His Thr Gln Gln Asp Pro Glu Val Pro Lys Ser Leu Val Ser Asn Leu	
55 60 65 70	
cgg atc cac tgc cct ctg ctt gcg ggc tct gct ctg atc acc ttt gat	475
Arg Ile His Cys Pro Leu Leu Ala Gly Ser Ala Leu Ile Thr Phe Asp	
75 80 85	
gac ccc aaa gtg gct gag cag gtg ctg caa caa aag gag cac acg atc	523
Asp Pro Lys Val Ala Glu Gln Val Leu Gln Gln Lys Glu His Thr Ile	
90 95 100	
aac atg gag gag tgc cgg ctg cgg gtg cag gtc cag ccc ttg gag ctg	571
Asn Met Glu Glu Cys Arg Leu Arg Val Gln Val Gln Pro Leu Glu Leu	
105 110 115	
ccc atg gtc acc acc atc cag gtg tcc agc cag ttg agt ggc cgg agg	619
Pro Met Val Thr Thr Ile Gln Val Ser Ser Gln Leu Ser Gly Arg Arg	
120 125 130	
gtg ttg gtc act gga ttt cct gcc agc ctc agg ctg agt gag gag gag	667
Val Leu Val Thr Gly Phe Pro Ala Ser Leu Arg Leu Ser Glu Glu Glu	
135 140 145 150	
ctg ctg gac aag cta gag atc ttc ttt ggc aag act agg aac gga ggt	715
Leu Leu Asp Lys Leu Glu Ile Phe Phe Gly Lys Thr Arg Asn Gly Gly	
155 160 165	
ggc gat gtg gac gtt cgg gag cta ctg cca ggg agt gtc atg ctg ggg	763
Gly Asp Val Asp Val Arg Glu Leu Leu Pro Gly Ser Val Met Leu Gly	
170 175 180	
ttt gct agg gat gga gtg gct cag cgt ctg tgc caa atc ggc cag ttc	811
Phe Ala Arg Asp Gly Val Ala Gln Arg Leu Cys Gln Ile Gly Gln Phe	
185 190 195	
aca gtg cca ctg ggt ggg cag caa gtc cct ctg aga gtc tct ccg tat	859
Thr Val Pro Leu Gly Gly Gln Gln Val Pro Leu Arg Val Ser Pro Tyr	
200 205 210	
gtg aat ggg gag atc cag aag gct gag atc agg tcg cag cca gtt ccc	907
Val Asn Gly Glu Ile Gln Lys Ala Glu Ile Arg Ser Gln Pro Val Pro	
215 220 225 230	
cgc tcg gta ctg gtg ctc aac att cct gat atc ttg gat ggc ccg gag	955
Arg Ser Val Leu Val Leu Asn Ile Pro Asp Ile Leu Asp Gly Pro Glu	
235 240 245	
ctg cat gac gtc ctg gag atc cac ttc cag aag ccc acc cgc ggg ggc	1003
Leu His Asp Val Leu Glu Ile His Phe Gln Lys Pro Thr Arg Gly Gly	
250 255 260	
ggg gag gta gag gcc ctg aca gtc gta ccc caa gga cag cag ggc cta	1051
Gly Glu Val Glu Ala Leu Thr Val Val Pro Gln Gly Gln Gln Gly Leu	
265 270 275	
gca gtc ttc acc tct gag tca ggc tag ggccc tccccctctc atcctcccca	1103
Ala Val Phe Thr Ser Glu Ser Gly *	
280 285	
cccccccgcc aaggttctca cactggcctg ggcttggtg cccatatagg aggtctgtat	1163
gttcaccaac agtcagagg ggtcacacat tgcaaaacac tgcccagaac agtaaaaaga	1223

gcctgcatgc caaaaaaaaaa aaa

1246

```
<210> 924
<211> 530
<212> DNA
<213> Homo sapiens
```

```
<220>  
<221> CDS  
<222> (45) .. (449)
```

[illegible]

<210> 925
<211> 2243
<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (94) .. (1341)

<400> 925

```

ccggaattcc cgggtcgacc cacgcgtccg cggacgcgtg ggcggaggtc tttggcgttc      60
agactcttag ctgaacgcgg agctgcggcg gct atg ctg tgg agc ggc tgc cgg      114
                               Met Leu Trp Ser Gly Cys Arg
                               1                               5

cgt ttc ggg gcg cgc ctc ggc tgc ctg ccc ggc ggt ctc cgg gtc ctc      162
Arg Phe Gly Ala Arg Leu Gly Cys Leu Pro Gly Gly Leu Arg Val Leu
      10                               15                               20

gtc cag acc ggc cac cgg agc ttg acc tcc tgc atc gac cct tcc atg      210
Val Gln Thr Gly His Arg Ser Leu Thr Ser Cys Ile Asp Pro Ser Met
      25                               30                               35

gga ctt aat gaa gag cag aaa gaa ttt caa aaa gtg gcc ttt gac ttt      258
Gly Leu Asn Glu Glu Gln Lys Glu Phe Gln Lys Val Ala Phe Asp Phe
      40                               45                               50                               55

gct gcc cga gag atg gct cca aat atg gca gag tgg gac cag aag gag      306
Ala Ala Arg Glu Met Ala Pro Asn Met Ala Glu Trp Asp Gln Lys Glu
                               60                               65                               70

ctg ttc cca gtg gat gtg atg cgg aag gca gcc cag cta ggc ttc gga      354
Leu Phe Pro Val Asp Val Met Arg Lys Ala Ala Gln Leu Gly Phe Gly
                               75                               80                               85

ggg gtc tac ata caa aca gat gtg ggc ggg tct ggg ctg tca cgt ctt      402
Gly Val Tyr Ile Gln Thr Asp Val Gly Gly Ser Gly Leu Ser Arg Leu
      90                               95                               100

gat acc tct gtc att ttt gaa gcc ttg gct aca ggc tgc acc agc acc      450
Asp Thr Ser Val Ile Phe Glu Ala Leu Ala Thr Gly Cys Thr Ser Thr
      105                               110                               115

aca gcc tat ata agc atc cac aac atg tgt gcc tgg atg att gat agc      498
Thr Ala Tyr Ile Ser Ile His Asn Met Cys Ala Trp Met Ile Asp Ser
      120                               125                               130                               135

ttc gga aat gag gaa cag agg cac aaa ttt tgc cca ccg ctc tgt acc      546
Phe Gly Asn Glu Glu Gln Arg His Lys Phe Cys Pro Pro Leu Cys Thr
      140                               145                               150

atg gag aag ttt gct tcc tac tgc ctc act gaa cca gga agt ggg agt      594
Met Glu Lys Phe Ala Ser Tyr Cys Leu Thr Glu Pro Gly Ser Gly Ser
      155                               160                               165

gat gct gcc tct ctt ctg acc tcc gct aag aaa cag gga gat cat tac      642
Asp Ala Ala Ser Leu Leu Thr Ser Ala Lys Lys Gln Gly Asp His Tyr
      170                               175                               180

atc ctc aat ggc tcc aag gcc ttc atc agt ggt gct ggt gag tca gac      690
Ile Leu Asn Gly Ser Lys Ala Phe Ile Ser Gly Ala Gly Glu Ser Asp
      185                               190                               195

atc tat gtg gtc atg tgc cga aca gga gga cca ggc ccc aag ggc atc      738
Ile Tyr Val Val Met Cys Arg Thr Gly Gly Pro Gly Pro Lys Gly Ile
      200                               205                               210                               215

```

tca tgc ata gtt gtt gag aag ggg acc cct ggc ctc agc ttt ggc aag Ser Cys Ile Val Val Glu Lys Gly Thr Pro Gly Leu Ser Phe Gly Lys 220 225 230	786
aag gag aaa aag gtg ggg tgg aac tcc cag cca aca cga gct gtg atc Lys Glu Lys Lys Val Gly Trp Asn Ser Gln Pro Thr Arg Ala Val Ile 235 240 245	834
ttc gaa gac tgt gct gtc cct gtg gcc aac aga att ggg agc gag ggg Phe Glu Asp Cys Ala Val Pro Val Ala Asn Arg Ile Gly Ser Glu Gly 250 255 260	882
cag ggc ttc ctc att gcc gtg aga gga ctg aac gga ggg agg atc aat Gln Gly Phe Leu Ile Ala Val Arg Gly Leu Asn Gly Gly Arg Ile Asn 265 270 275	930
att gct tcc tgc tcc ctg ggg gct gcc cac gcc tct gtc atc ctc acc Ile Ala Ser Cys Ser Leu Gly Ala Ala His Ala Ser Val Ile Leu Thr 280 285 290 295	978
cga gac cac ctc aat gtc cgg aag cag ttt gga gag cct ctg gcc agt Arg Asp His Leu Asn Val Arg Lys Gln Phe Gly Glu Pro Leu Ala Ser 300 305 310	1026
aac cag tac ttg caa ttc aca ctg gct gat atg gca aca agg ctg gtg Asn Gln Tyr Leu Gln Phe Thr Leu Ala Asp Met Ala Thr Arg Leu Val 315 320 325	1074
gcc gcg cgg ctg atg gtc cgc aat gca gca gtg gct ctg cag gag gag Ala Ala Arg Leu Met Val Arg Asn Ala Ala Val Ala Leu Gln Glu Glu 330 335 340	1122
agg aag gat gca gtg gcc ttg tgc tcc atg gcc aag ctc ttt gct aca . Arg Lys Asp Ala Val Ala Leu Cys Ser Met Ala Lys Leu Phe Ala Thr 345 350 355	1170
gat gaa tgc ttt gcc atc tgc aac cag gcc ttg cag atg cac ggg ggc Asp Glu Cys Phe Ala Ile Cys Asn Gln Ala Leu Gln Met His Gly Gly 360 365 370 375	1218
tac ggc tac ctg aag gat tac gct gtt cag cag tac gtg cgg gac tcc Tyr Gly Tyr Leu Lys Asp Tyr Ala Val Gln Gln Tyr Val Arg Asp Ser 380 385 390	1266
agg gtc cac cag att cta gaa ggt agc aat gaa gtg atg agg ata ctg Arg Val His Gln Ile Leu Glu Gly Ser Asn Glu Val Met Arg Ile Leu 395 400 405	1314
atc tct aga agc ctg ctt cag gag tag aaccc acacttggtc tggcctgggtg Ile Ser Arg Ser Leu Leu Gln Glu *	1366
410 415	
ttcagtgcga ctgcagtcag tgttgagtgg tgccatgtgg gccgctctat tccaaaggaa	1426
tcatggatta gacccaaggg ctgagctcct ctagggcagg acctgcaccc tgtgtgttgg	1486
caccagcatc gggctcttga ctggggcaga atccccagtg gaaccggaag agctggactg	1546
atgagaaaca tcagaagaac acatactacc ttgttttccct aatgccagaa gggtgaccag	1606
tgaagattca ccgtcaaacc atgaaagtcc tttcttggat ccactttatc ttgattagtc	1666
tgcattttac tagttcactg gatccctcct ctaggggcct ggggactttc actgatgtc	1726

```

ttcctgattc tagagcaaag gtgtgggaag gggaaatgga ggaatgccct cctgtctgtg 1786
tcgttctctg tgccacagct acagatgcag aaggtttctc tggatagcac acctctgaat 1846
gtaaatcatg ataaaatgga tatttggaat cttactccta agctgtgatt taggggtgat 1906
ttctacttct ggactgcctc aatatcaagg gctgagactt ttgaattttg aatattcggt 1966
gggtttcatg ttaagaagcc tgtggtctag gagtgtctatt cagtgtttct tttcctgata 2026
aacactttga atattttttt tgtgtttttg tttccttttc tgaagctgtt cctcctttta 2086
aatattttta atcacattga taaaatctat ccttcaccac ctctggttct actatagttg 2146
atttttattt taaatgttta attgtatttg attaaacact taactggatt ttggaataat 2206
aaaactctcg tccaatttgg cttttaaaaa aaaaaaa 2243

```

```

<210> 926
<211> 1014
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> CDS
<222> (141)..(986)

```

```

<400> 926
tcggcctgac ttcccggggtc gacgatttgc tcttcgggt gtcaagctcc cggccggggt 60
gactcaagcg gaggcgcgcg gaacagtgc cgaggcgatt cccgccagg ctctgtaac 120
cgccaggcag tggccccgcc      atg tcc cag ccc egg acc cca gag cag gca 170
                        Met Ser Gln Pro Arg Thr Pro Glu Gln Ala
                        1              5              10

ctg gat aca ccg ggg gac tgc ccc cca ggc agg aga gac gag gac gct 218
Leu Asp Thr Pro Gly Asp Cys Pro Pro Gly Arg Arg Asp Glu Asp Ala
                        15              20              25

ggg gag ggg atc cag tgc tcc caa cgc atg ctc agc ttc agt gac gcc 266
Gly Glu Gly Ile Gln Cys Ser Gln Arg Met Leu Ser Phe Ser Asp Ala
                        30              35              40

ctg ctg tcc atc atc gcc acc gtc atg atc ctg cct gtg acc cac acg 314
Leu Leu Ser Ile Ile Ala Thr Val Met Ile Leu Pro Val Thr His Thr
                        45              50              55

gag atc tcc cca gaa cag cag ttc gac aga agt gta cag agg ctt ctg 362
Glu Ile Ser Pro Glu Gln Gln Phe Asp Arg Ser Val Gln Arg Leu Leu
                        60              65              70

gca aca cgg att gcc gtc tac ctg atg acc ttt ctc atc gtg aca gtg 410
Ala Thr Arg Ile Ala Val Tyr Leu Met Thr Phe Leu Ile Val Thr Val
                        75              80              85              90

gcc tgg gca gca cac aca agg ttg ttc caa gtt gtt ggg aaa aca gac 458
Ala Trp Ala Ala His Thr Arg Leu Phe Gln Val Val Gly Lys Thr Asp
                        95              100              105

```



```

gac aca ctt gcc ctg ctc aac ctg gcc tgc atg aag acc atc acc ttc      506
Asp Thr Leu Ala Leu Leu Asn Leu Ala Cys Met Lys Thr Ile Thr Phe
      110      115      120

ctg cct tac acg ttt tcg tta atg gtg acc ttc cct gat gtg cct ctg      554
Leu Pro Tyr Thr Phe Ser Leu Met Val Thr Phe Pro Asp Val Pro Leu
      125      130      135

ggc atc ttc ttg ttc tgt gtg tgt gtg atc gcc att ggg gtc gtg cag      602
Gly Ile Phe Leu Phe Cys Val Cys Val Ile Ala Ile Gly Val Val Gln
      140      145      150

gca ctg att gtg ggg tac gca ttc cac ttc ccg cac ctg ctg agc ccg      650
Ala Leu Ile Val Gly Tyr Ala Phe His Phe Pro His Leu Leu Ser Pro
      155      160      165      170

cag atc cag cgc tct gcc cac agg gct ctg tac cga cga cac gtc ctg      698
Gln Ile Gln Arg Ser Ala His Arg Ala Leu Tyr Arg Arg His Val Leu
      175      180      185

ggc atc gtc ctc caa ggc ccg gcc ctg tgc ttt gca gcg gcc atc ttc      746
Gly Ile Val Leu Gln Gly Pro Ala Leu Cys Phe Ala Ala Ala Ile Phe
      190      195      200

tct ctc ttc ttt gtc ccc ctg tct tac ctg ctg atg gtg act gtc atc      794
Ser Leu Phe Phe Val Pro Leu Ser Tyr Leu Leu Met Val Thr Val Ile
      205      210      215

ctc ctc ccc tat gtc agc aag gtc acc ggc tgg tgc aga gac agg ctc      842
Leu Leu Pro Tyr Val Ser Lys Val Thr Gly Trp Cys Arg Asp Arg Leu
      220      225      230

ctg ggc cac agg gag ccc tcg gct cac cca gtg gaa gtc ttc tcg ttt      890
Leu Gly His Arg Glu Pro Ser Ala His Pro Val Glu Val Phe Ser Phe
      235      240      245      250

gac ctc cac gag cca ctc agc aag gag cgc gtg gaa gcc ttc agc gac      938
Asp Leu His Glu Pro Leu Ser Lys Glu Arg Val Glu Ala Phe Ser Asp
      255      260      265

gga gtc tac gcc atc gtg gcc acg ctt ctc atc ctg gac atc tgg tga      986
Gly Val Tyr Ala Ile Val Ala Thr Leu Leu Ile Leu Asp Ile Trp *
      270      275      280

ggaccccgcg tcacctgccc cagctatt      1014

```

<210> 927

<211> 1893

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (289)..(1317)

<220>

<221> misc_feature

<222> (1)...(1893)

<223> n = a,t,c or g

<400> 927

caggggtgatg gatatctgca gaattcggct tactcactat agggctcgag cggccgcccg	60
ggcaggtgca gaacagaaca ctttctcatg tccaggggtca gattacaaga gcactcaaga	120
ctttactgac gaaaactcag gaaatcctct atcacaaaga ggtttggtgcaa ctaaactaag	180
acattaaaag gaaaatacca gatgccactc tgcaggctgc aataactact acttactgga	240
tacattcaaa ccttccagaa tcaacagtta tcaggtaacc aacaagaa atg caa gcc	297
	Met Gln Ala
	1
gtc gac aat ctc acc tct gcg cct ggg aac acc agt ctg tgc acc aga	345
Val Asp Asn Leu Thr Ser Ala Pro Gly Asn Thr Ser Leu Cys Thr Arg	
5 10 15	
gac tac aaa atc acc cag gtc ctc ttc cca ctg ctc tac act gtc ctg	393
Asp Tyr Lys Ile Thr Gln Val Leu Phe Pro Leu Leu Tyr Thr Val Leu	
20 25 30 35	
ttt ttt gtt gga ctt atc aca aat ggc ctg gcg atg agg att ttc ttt	441
Phe Phe Val Gly Leu Ile Thr Asn Gly Leu Ala Met Arg Ile Phe Phe	
40 45 50	
caa atc cgg agt aaa tca aac ttt att att ttt ctt aag aac aca gtc	489
Gln Ile Arg Ser Lys Ser Asn Phe Ile Ile Phe Leu Lys Asn Thr Val	
55 60 65	
att tct gat ctt ctc atg att ctg act ttt cca ttc aaa att ctt agt	537
Ile Ser Asp Leu Leu Met Ile Leu Thr Phe Pro Phe Lys Ile Leu Ser	
70 75 80	
gat gcc aaa ctg gga aca gga cca ctg aga act ttt gtg tgt caa gtt	585
Asp Ala Lys Leu Gly Thr Gly Pro Leu Arg Thr Phe Val Cys Gln Val	
85 90 95	
acc tcc gtc ata ttt tat ttc aca atg tat atc agt att tca ttc ctg	633
Thr Ser Val Ile Phe Tyr Phe Thr Met Tyr Ile Ser Ile Ser Phe Leu	
100 105 110 115	
gga ctg ata act atc gat cgc tac cag aag acc acc agg cca ttt aaa	681
Gly Leu Ile Thr Ile Asp Arg Tyr Gln Lys Thr Thr Arg Pro Phe Lys	
120 125 130	
aca tcc aac ccc aaa aat ctc ttg ggg gct aag att ctc tct gtt gtc	729
Thr Ser Asn Pro Lys Asn Leu Leu Gly Ala Lys Ile Leu Ser Val Val	
135 140 145	
atc tgg gca ttc atg ttc tta ctc tct ttg cct aac atg att ctg acc	777
Ile Trp Ala Phe Met Phe Leu Leu Ser Leu Pro Asn Met Ile Leu Thr	
150 155 160	
aac agg cag ccg aga gac aag aat gtg aag aaa tgc tct ttc ctt aaa	825
Asn Arg Gln Pro Arg Asp Lys Asn Val Lys Lys Cys Ser Phe Leu Lys	
165 170 175	
tca gag ttc ggt cta gtc tgg cat gaa ata gta aat tac atc tgt caa	873
Ser Glu Phe Gly Leu Val Trp His Glu Ile Val Asn Tyr Ile Cys Gln	
180 185 190 195	
gtc att ttc tgg att aat ttc tta att gtt att gta tgt tat aca ctc	921
Val Ile Phe Trp Ile Asn Phe Leu Ile Val Ile Val Cys Tyr Thr Leu	
200 205 210	

```

att aca aaa gaa ctg tac cgg tca tac gta aga acg agg ggt gta ggt      969
Ile Thr Lys Glu Leu Tyr Arg Ser Tyr Val Arg Thr Arg Gly Val Gly
      215                      220                      225

aaa gtc ccc agg aaa aag gtg aac gtc aaa gtt ttc att atc att gct      1017
Lys Val Pro Arg Lys Lys Val Asn Val Lys Val Phe Ile Ile Ile Ala
      230                      235                      240

gta ttc ttt att tgt ttt gtt cct ttc cat ttt gcc cga att cct tac      1065
Val Phe Phe Ile Cys Phe Val Pro Phe His Phe Ala Arg Ile Pro Tyr
      245                      250                      255

acc ctg agc caa acc cgg gat gtc ttt gac tgc act gct gaa aat act      1113
Thr Leu Ser Gln Thr Arg Asp Val Phe Asp Cys Thr Ala Glu Asn Thr
      260                      265                      270                      275

ctg ttc tat gtg aaa gag agc act ctg tgg tta act tcc tta aat gca      1161
Leu Phe Tyr Val Lys Glu Ser Thr Leu Trp Leu Thr Ser Leu Asn Ala
      280                      285                      290

tgc ctg gat ccg ttc atc tat ttt ttc ctt tgc aag tcc ttc aga aat      1209
Cys Leu Asp Pro Phe Ile Tyr Phe Phe Leu Cys Lys Ser Phe Arg Asn
      295                      300                      305

tcc ttg ata agt atg ctg aag tgc ccc aat tct gca aca tct ctg tcc      1257
Ser Leu Ile Ser Met Leu Lys Cys Pro Asn Ser Ala Thr Ser Leu Ser
      310                      315                      320

cag gac aat agg aaa aaa gaa cag gat ggt ggt gac cca aat gaa gag      1305
Gln Asp Asn Arg Lys Lys Glu Gln Asp Gly Gly Asp Pro Asn Glu Glu
      325                      330                      335

act cca atg taa aca aattaactaa ggaaatattt caatctcttt gtgttcagaa      1360
Thr Pro Met *
      340

ctcgttaaag caaagcgcta agtaaaaata ttaactgacg aagaagcaac taagttaata      1420

ataatgactc taaagaaaca gaagattaca aaagcaattt tcattttacct ttccagtatg      1480

aaaagctatc ttaaaatata gaaaactaat ctaaactgta gctgtattag cagcaaaaca      1540

aacgacatcc aattgtcatg ctgcatgcaa aactacacag aattcatggt ttgcagagtt      1600

ttgccaaaat gagtaatcat ataatattta ctgtaatttt taaaatacat ttcgttcac      1660

aattttattt tttcataatc cactaaggga agaacgatca attggatata atcttcttac      1720

caaaaaatga tagntaaaat gtatataata tctagtcccc taacccaaaat ncttgaccta      1780

ttgggatact taataaaaaa ttaaagtaag tgggataccc caaagaaata ataactattt      1840

aactttttca tttattagcc aaaaacccta aggggattta aacctaattg gga      1893

```

<210> 928
 <211> 627
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS

<222> (72) .. (494)

<220>

<221> misc_feature

<222> (1) ... (627)

<223> n = a,t,c or g

<400> 928

```

atttggccct cgaggccaag aattcggcac gaggacacaa ctgtgttcac tagcaacctc      60
aaacagacac c atg gtg cac ctg act cct gag gag aag tct gcc gtt act      110
          Met Val His Leu Thr Pro Glu Glu Lys Ser Ala Val Thr
              1              5              10

gcc ctg tgg ggc aag gtg aac gtg gat gaa gtt ggt ggt gag gcc ctg      158
Ala Leu Trp Gly Lys Val Asn Val Asp Glu Val Gly Gly Glu Ala Leu
          15              20              25

ggc agg ctg ctg gtg gtc tac cct tgg acc cag agg ttc ttt gag tcc      206
Gly Arg Leu Leu Val Val Tyr Pro Trp Thr Gln Arg Phe Phe Glu Ser
          30              35              40              45

ttt ggg gat ctg tcc act cct gat gct gtt atg ggc aac cct aag gtg      254
Phe Gly Asp Leu Ser Thr Pro Asp Ala Val Met Gly Asn Pro Lys Val
              50              55              60

aag gct cat ggc aag aaa gtg ctc ggt gcc ttt agt gat ggc ctg gct      302
Lys Ala His Gly Lys Lys Val Leu Gly Ala Phe Ser Asp Gly Leu Ala
              65              70              75

cac ctg gac aac ctc aag ggc acc ttt gcc aca ctg agt gag ctg cac      350
His Leu Asp Asn Leu Lys Gly Thr Phe Ala Thr Leu Ser Glu Leu His
              80              85              90

tgt gac aag ctg cac gtg gat cct gag aac ttc agg ctc ctg ggc aac      398
Cys Asp Lys Leu His Val Asp Pro Glu Asn Phe Arg Leu Leu Gly Asn
          95              100              105

gtg ctg gtc tgt gtg ctg gcc cat cac ttt ggc aaa gaa ttc acc cca      446
Val Leu Val Cys Val Leu Ala His His Phe Gly Lys Glu Phe Thr Pro
110              115              120              125

cca gtt gca ggc ttg cct atc aga aag ttg gtg gct ggt tgt ggc taa      494
Pro Val Ala Gly Leu Pro Ile Arg Lys Leu Val Ala Gly Cys Gly *
          130              135              140

tgccctggcc cacaagtaat cacttaagcc tcgctttcct tgctggtcca atttccaatt      554
aaaagggttcc tttggttccc taagtccaaa tacttaaachn ggggggatat tattgaaagg      614
gccttgagaa tct      627

```

<210> 929

<211> 2402

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (295) .. (1962)

<400> 929
 gcccggttgta ccgccccgga attccccgggt cgacccacgc gtccgaccac gcgtacgccc 60
 acgcgtgcgg ctcaaggcat ttgggaagtg caaaatgaca tgcaccccct ctggaggggc 120
 gcacctttga agtcacctgg accaaggaaa ggcctgccc tgaaggetgg tcacttgca 180
 aggtaaactc cctcttttga cttctggcca gggtttgtgc tgagctggct gcagccgctc 240
 tcagcctcgc tccgggcacg tcgggcagcc tcgggccctc ctgcctgcag gatc atg 297
 Met
 1
 ccc acc acc gtg gac gat gtc ctg gag cat gga ggg gag ttt cac ttt 345
 Pro Thr Thr Val Asp Asp Val Leu Glu His Gly Gly Glu Phe His Phe
 5 10 15
 ttc cag aag caa atg ttt ttc ctc ttg gct ctg ctc tcg gct acc ttc 393
 Phe Gln Lys Gln Met Phe Phe Leu Leu Ala Leu Leu Ser Ala Thr Phe
 20 25 30
 gcg ccc atc tac gtg ggc atc gtc ttc ctg ggc ttc acc cct gac cac 441
 Ala Pro Ile Tyr Val Gly Ile Val Phe Leu Gly Phe Thr Pro Asp His
 35 40 45
 cgc tgc cgg agc ccc gga gtg gcc gag ctg agt ctg cgc tgc ggc tgg 489
 Arg Cys Arg Ser Pro Gly Val Ala Glu Leu Ser Leu Arg Cys Gly Trp
 50 55 60 65
 agt cct gca gag gaa ctg aac tac acg gtg ccg ggc cca gga cct gcg 537
 Ser Pro Ala Glu Glu Leu Asn Tyr Thr Val Pro Gly Pro Gly Pro Ala
 70 75 80
 ggc gaa gcc tcc cca aga cag tgt agg cgc tac gag gtg gac tgg aac 585
 Gly Glu Ala Ser Pro Arg Gln Cys Arg Arg Tyr Glu Val Asp Trp Asn
 85 90 95
 cag agc acc ttt gac tgc gtg gac ccc ctg gcc agc ctg gac acc aac 633
 Gln Ser Thr Phe Asp Cys Val Asp Pro Leu Ala Ser Leu Asp Thr Asn
 100 105 110
 agg agc cgc ctg cca ctg ggc ccc tgc cgg gac ggc tgg gtg tac gag 681
 Arg Ser Arg Leu Pro Leu Gly Pro Cys Arg Asp Gly Trp Val Tyr Glu
 115 120 125
 acg cct ggc tcg tcc atc gtc acc gag ttt aac ctg gta tgt gcc aac 729
 Thr Pro Gly Ser Ser Ile Val Thr Glu Phe Asn Leu Val Cys Ala Asn
 130 135 140 145
 tcc tgg atg ttg gac cta ttc cag tca tca gtg aat gta gga ttc ttt 777
 Ser Trp Met Leu Asp Leu Phe Gln Ser Ser Val Asn Val Gly Phe Phe
 150 155 160
 att ggc tct atg agt atc ggc tac ata gca gac agg ttt ggc cgt aag 825
 Ile Gly Ser Met Ser Ile Gly Tyr Ile Ala Asp Arg Phe Gly Arg Lys
 165 170 175
 ctc tgc ctc cta act aca gtc ctc ata aat gct gca gct gga gtt ctc 873
 Leu Cys Leu Leu Thr Thr Val Leu Ile Asn Ala Ala Ala Gly Val Leu
 180 185 190
 atg gcc att tcc cca acc tat acg tgg atg tta att ttt cgc tta atc 921
 Met Ala Ile Ser Pro Thr Tyr Thr Trp Met Leu Ile Phe Arg Leu Ile
 195 200 205

caa gga ctg gtc agc aaa gca ggc tgg tta ata ggc tac atc ctg att Gln Gly Leu Val Ser Lys Ala Gly Trp Leu Ile Gly Tyr Ile Leu Ile 210 215 220 225	969
aca gaa ttt gtt ggg cgg aga tat cgg aga aca gtg ggg att ttt tac Thr Glu Phe Val Gly Arg Arg Tyr Arg Thr Val Gly Ile Phe Tyr 230 235 240	1017
caa gtt gcc tat aca gtt ggg ctc ctg gtg cta gct ggg gtg gct tac Gln Val Ala Tyr Thr Val Gly Leu Leu Val Leu Ala Gly Val Ala Tyr 245 250 255	1065
gca ctt cct cac tgg agg tgg ttg cag ttc aca gtt gct ctg ccc aac Ala Leu Pro His Trp Arg Trp Leu Gln Phe Thr Val Ala Leu Pro Asn 260 265 270	1113
ttc ttc ttc ttg ctc tat tac tgg tgc ata cct gag tct ccc agg tgg Phe Phe Phe Leu Leu Tyr Tyr Trp Cys Ile Pro Glu Ser Pro Arg Trp 275 280 285	1161
ctg atc tcc cag aat aag aat gct gaa gcc atg aga atc att aag cac Leu Ile Ser Gln Asn Lys Asn Ala Glu Ala Met Arg Ile Ile Lys His 290 295 300 305	1209
atc gca aag aaa aat gga aaa tct cta ccc gcc tcc ctt cag cgc ctg Ile Ala Lys Lys Asn Gly Lys Ser Leu Pro Ala Ser Leu Gln Arg Leu 310 315 320	1257
aga ctt gaa gag gaa act ggc aag aaa ttg aac cct tca ttt ctt gac Arg Leu Glu Glu Glu Thr Gly Lys Lys Leu Asn Pro Ser Phe Leu Asp 325 330 335	1305
ttg gtc aga act cct cag ata agg aaa cat act atg ata ttg atg tac Leu Val Arg Thr Pro Gln Ile Arg Lys His Thr Met Ile Leu Met Tyr 340 345 350	1353
aac tgg ttc acg agc tct gtg ctc tac cag ggc ctc atc atg cac atg Asn Trp Phe Thr Ser Ser Val Leu Tyr Gln Gly Leu Ile Met His Met 355 360 365	1401
ggc ctt gca ggt gac aat atc tac ctg gat ttc ttc tac tct gcc ctg Gly Leu Ala Gly Asp Asn Ile Tyr Leu Asp Phe Phe Tyr Ser Ala Leu 370 375 380 385	1449
gtt gaa ttc cca gct gcc ttc atg atc atc ctc acc atc gac cgc atc Val Glu Phe Pro Ala Ala Phe Met Ile Ile Leu Thr Ile Asp Arg Ile 390 395 400	1497
gga cgc cgt tac cct tgg gct gca tca aat atg gtt gca ggg gca gcc Gly Arg Arg Tyr Pro Trp Ala Ala Ser Asn Met Val Ala Gly Ala Ala 405 410 415	1545
tgt ctg gcc tca gtt ttt ata cct ggt gat cta caa tgg cta aaa att Cys Leu Ala Ser Val Phe Ile Pro Gly Asp Leu Gln Trp Leu Lys Ile 420 425 430	1593
att atc tca tgc ttg gga aga atg ggg atc aca atg gcc tat gag ata Ile Ile Ser Cys Leu Gly Arg Met Gly Ile Thr Met Ala Tyr Glu Ile 435 440 445	1641
gtc tgc ctg gtc aat gct gag ctg tac ccc aca ttc att agg aat ctt Val Cys Leu Val Asn Ala Glu Leu Tyr Pro Thr Phe Ile Arg Asn Leu 450 455 460 465	1689

```

ggc gtc cac atc tgt tcc tca atg tgt gac att ggt ggc atc atc acg      1737
Gly Val His Ile Cys Ser Ser Met Cys Asp Ile Gly Gly Ile Ile Thr
                470                      475                      480

cca ttc ctg gtc tac cgg ctc act aac atc tgg ctt gag ctc ccg ctg      1785
Pro Phe Leu Val Tyr Arg Leu Thr Asn Ile Trp Leu Glu Leu Pro Leu
                485                      490                      495

atg gtt ttc ggc gta ctt ggc ttg gtt gct gga ggt ctg gtg ctg ttg      1833
Met Val Phe Gly Val Leu Gly Leu Val Ala Gly Gly Leu Val Leu Leu
                500                      505                      510

ctt cca gaa act aaa ggg aaa gct ttg cct gag acc atc gag gaa gcc      1881
Leu Pro Glu Thr Lys Gly Lys Ala Leu Pro Glu Thr Ile Glu Glu Ala
                515                      520                      525

gaa aat atg caa aga cca aga aaa aat aaa gaa aag atg att tac ctc      1929
Glu Asn Met Gln Arg Pro Arg Lys Asn Lys Glu Lys Met Ile Tyr Leu
                530                      535                      540                      545

caa gtt cag aaa cta gac att cca ttg aac taa gaagagag accgttgctg      1980
Gln Val Gln Lys Leu Asp Ile Pro Leu Asn *
                550                      555

ctgtcatgac ctagctttga tggcagcaag accaaaagta gaaatccctg cactcatcac      2040

aaagcccata caactcaacc aaacttacct ctgagcccta tcaacctagg tctacagcca      2100

gtggagtcta ttgtacactg tggaaaaata cccatgggac cagatcctgc caaattcttc      2160

cagctcactt tattctcagc attcctagga cattggacat tggttttctg gagggttttt      2220

tttccatctt tgtatTTTTT taaatttgat tcttttcttt gcaatgctat ctaaccagaa      2280

tacatagggg aactgtgggc taggcaaaca aaatagaaaa aagtgtgaaa aacagtaaag      2340

ttgggagagg agcatctatt ttcttaaaga aataaaacac ccaaaacaat aaaaaaaaaa      2400

aa                                                                 2402

```

```

<210> 930
<211> 2029
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> CDS
<222> (69)..(917)

```

```

<220>
<221> misc_feature
<222> (1)..(2029)
<223> n = a,t,c or g

```

```

<400> 930
ccggaattcc cgggtcgacc cacgcgtccg cccacgcgtc cgtggactct cagattcttt      60

actatgca atg ttg ggg gtg aat ccc cgc ttt gac tca gct tcc tcc agc      110
Met Leu Gly Val Asn Pro Arg Phe Asp Ser Ala Ser Ser Ser
    1             5             10

```

tac tat ttg gac atg cac agc ctc ccc cat gtc atc aac cca gtg gag	158
Tyr Tyr Leu Asp Met His Ser Leu Pro His Val Ile Asn Pro Val Glu	
15 20 25 30	
tcc cgg ctg gga tcc agt gct gcc tcc ttg tac cct gtg ctc aac ttt	206
Ser Arg Leu Gly Ser Ser Ala Ala Ser Leu Tyr Pro Val Leu Asn Phe	
35 40 45	
cta ctc tac gtg cct gag ctt gca cac tca ccg ctg tac att cag gac	254
Leu Leu Tyr Val Pro Glu Leu Ala His Ser Pro Leu Tyr Ile Gln Asp	
50 55 60	
aag gat ggc gct cca gtg gcc acc aat gcc ttc cat agt ccc cgc tgg	302
Lys Asp Gly Ala Pro Val Ala Thr Asn Ala Phe His Ser Pro Arg Trp	
65 70 75	
ggt ggc att atg gta tat aat gtt gac tcc aaa acc tat aat gcc tca	350
Gly Gly Ile Met Val Tyr Asn Val Asp Ser Lys Thr Tyr Asn Ala Ser	
80 85 90	
gtg ctg cca gtg aga gtc gag gtg gac atg gtg cga gtg atg gag gtg	398
Val Leu Pro Val Arg Val Glu Val Asp Met Val Arg Val Met Glu Val	
95 100 105 110	
ttc ctg gca cag ttg cgg ttg ctc ttt ggg att gct cag ccc cag ctg	446
Phe Leu Ala Gln Leu Arg Leu Leu Phe Gly Ile Ala Gln Pro Gln Leu	
115 120 125	
cct cca aaa tgc ctg ctt tca ggg cct acg agt gaa ggg cta atg acc	494
Pro Pro Lys Cys Leu Leu Ser Gly Pro Thr Ser Glu Gly Leu Met Thr	
130 135 140	
tgg gag cta gac cgg ctg ctc tgg gct cgg tca gtg gag aac ctg gcc	542
Trp Glu Leu Asp Arg Leu Leu Trp Ala Arg Ser Val Glu Asn Leu Ala	
145 150 155	
aca gcc acc acc acc ctt acc tcc ctg gcg cag ctt ctg ggc aag atc	590
Thr Ala Thr Thr Thr Leu Thr Ser Leu Ala Gln Leu Leu Gly Lys Ile	
160 165 170	
agc aac att gtc att aag gac gac gtg gca tct gag gtg tac aag gct	638
Ser Asn Ile Val Ile Lys Asp Asp Val Ala Ser Glu Val Tyr Lys Ala	
175 180 185 190	
gta gct gcc gtc cag aag tcg gca gaa gag ttg gcg tct ggg cac ctg	686
Val Ala Ala Val Gln Lys Ser Ala Glu Glu Leu Ala Ser Gly His Leu	
195 200 205	
gca tct gcc ttt gtc gcc agc cag gaa gct gtg aca tcc tct gag ctt	734
Ala Ser Ala Phe Val Ala Ser Gln Glu Ala Val Thr Ser Ser Glu Leu	
210 215 220	
gcc ttc ttt gac ccg tca ctc ctc cac ctc ctt tat ttc cct gat gac	782
Ala Phe Phe Asp Pro Ser Leu Leu His Leu Leu Tyr Phe Pro Asp Asp	
225 230 235	
cag aag ttt gcc atc tac atc cca ctc ttc ctg cct atg gct gtg ccc	830
Gln Lys Phe Ala Ile Tyr Ile Pro Leu Phe Leu Pro Met Ala Val Pro	
240 245 250	
atc ctc ctg tcc ctg gtc aag atc ttc ctg gag acc cgc aag tcc tgg	878
Ile Leu Leu Ser Leu Val Lys Ile Phe Leu Glu Thr Arg Lys Ser Trp	
255 260 265 270	


```

aga aag cct gag aag aca gac tgt gta cgt gat atc tga acactcctca      927
Arg Lys Pro Glu Lys Thr Asp Cys Val Arg Asp Ile  *
          275                      280

cttcttcccc aggacatgat gagctacatt gggccaaga ggacagcagt ggtgcggggg      987
ataatgcacc gggaggcctt taacatcatt ggccgccgca tagtccaggt ggcccaggcc     1047
atgtctttga ctgaggatgt gcttgctgct gctctggctg accaccttcc agaggacaag     1107
tggagcgctg agaagaggcg gcctctcaag tccagcttgg gctatgagat caccttcagt     1167
ttactcaacc cagaccccaa gtcccatgat gtctactggg acattgaggg ggctgtccgg     1227
cgctatgtgc aacctttcct gaatgccctc ggtgcgctg gcaacttctc tgtggactct     1287
cagattcttt actatgcaat gttgggggtg aatccccgct ttgactcagc ttcctccagc     1347
tactatttgg acatgcacag cctcccccat gtcacacacc cagtggagtc cgggctggga     1407
tccagtgtct cctccttgta ccctgtgctc aactttctac tctacgtgcc tgagcttgca     1467
cactcacccg tgtacattca ggacaaggat ggcgctccag tggccaccaa tgccttccat     1527
agtccccgct ggggtggcat tatggtatat aatgttgact ccaaaccta taatgcctca     1587
gtgctgccag tgagagtcca ggtggacatg gtgcgagtga tggaggtgtt cctggcacag     1647
ttgcggttgc tctttgggat tgctcagccc cagctgcctc caaaatgcct gctttcaggg     1707
cctacgagtg aagggtcaat gacctgggag ctagaccggc tgctctgggc tcggtcagtg     1767
gagaacctgg ccacagccac caccaccctt acctccctgg cgcagcttct gggcaagatc     1827
agcaacattg tcattaagga cgacgtggca tctgaggtgt acaaggctgt agctgccgtc     1887
cagaagtogg cagaagagtt ggcgtctggg cacctggcat ctgcctttgt cgccagccag     1947
gaagctgtga catctcacg aaatcgtcga cccgggaatt ccggnccggt cctgcaggcg     2007
acaggcttac aatggcgagc ct                                           2029

```

```

<210> 931
<211> 3208
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> CDS
<222> (1) .. (2364)

```

```

<400> 931
atg ggg tgg acc gac tcc aag ctg aac ttc cgg aag gcg gtg atc cag      48
Met Gly Ser Thr Asp Ser Lys Leu Asn Phe Arg Lys Ala Val Ile Gln
  1             5             10             15

ctc acc acc aag acg cag ccc gtg gaa gcc acc gat gat gcc ttt tgg      96
Leu Thr Thr Lys Thr Gln Pro Val Glu Ala Thr Asp Asp Ala Phe Trp
    20             25             30

```

gac cag ttc tgg gca gac aca gcc acc tcg gtg cag gat gtg ttt gca	144
Asp Gln Phe Trp Ala Asp Thr Ala Thr Ser Val Gln Asp Val Phe Ala	
35 40 45	
ctg gtg ccg gca gca gag atc cgg gcc gtg cgg gaa gag tca ccc tcc	192
Leu Val Pro Ala Ala Glu Ile Arg Ala Val Arg Glu Glu Ser Pro Ser	
50 55 60	
aac ttg gcc acc ctg tgc tac aag gcc gtt gag aag ctg gtg cag gga	240
Asn Leu Ala Thr Leu Cys Tyr Lys Ala Val Glu Lys Leu Val Gln Gly	
65 70 75 80	
gct gag agt ggc tgc cac tcg gag aag gag aag cag atc gtc ctg aac	288
Ala Glu Ser Gly Cys His Ser Glu Lys Glu Lys Gln Ile Val Leu Asn	
85 90 95	
tgc agc cgg ctg ctc acc cgc gtg ctg ccc tac atc ttt gag gac ccc	336
Cys Ser Arg Leu Leu Thr Arg Val Leu Pro Tyr Ile Phe Glu Asp Pro	
100 105 110	
gac tgg agg ggc ttc ttc tgg tcc aca gtg ccc ggg gca ggg cga gga	384
Asp Trp Arg Gly Phe Phe Trp Ser Thr Val Pro Gly Ala Gly Arg Gly	
115 120 125	
ggg gga gaa gag gat gat gag cat gcc agg ccc ctg gcc gag tcc ctg	432
Gly Gly Glu Glu Asp Asp Glu His Ala Arg Pro Leu Ala Glu Ser Leu	
130 135 140	
ctc ctg gcc att gct gac ctg ctc ttc tgc ccg gac ttc acg gtt cag	480
Leu Leu Ala Ile Ala Asp Leu Leu Phe Cys Pro Asp Phe Thr Val Gln	
145 150 155 160	
agc cac cgg agg agc act gtg gac tcg gca gag gac gtc cac tcc ctg	528
Ser His Arg Arg Ser Thr Val Asp Ser Ala Glu Asp Val His Ser Leu	
165 170 175	
gac agc tgt gaa tac atc tgg gag gct ggt gtg ggc ttc gct cac tcc	576
Asp Ser Cys Glu Tyr Ile Trp Glu Ala Gly Val Gly Phe Ala His Ser	
180 185 190	
ccc cag cct aac tac atc cac gat atg aac cgg atg gag ctg ctg aaa	624
Pro Gln Pro Asn Tyr Ile His Asp Met Asn Arg Met Glu Leu Leu Lys	
195 200 205	
ctg ctg ctg aca tgc ttc tcc gag gcc atg tac ctg ccc cca gct ccg	672
Leu Leu Leu Thr Cys Phe Ser Glu Ala Met Tyr Leu Pro Pro Ala Pro	
210 215 220	
gaa agt ggc agc acc aac cca tgg gtt cag ttc ttt tgt tcc acg gag	720
Glu Ser Gly Ser Thr Asn Pro Trp Val Gln Phe Phe Cys Ser Thr Glu	
225 230 235 240	
aac aga cat gcc ctg ccc ctc ttc acc tcc ctc ctc aac acc gtg tgt	768
Asn Arg His Ala Leu Pro Leu Phe Thr Ser Leu Leu Asn Thr Val Cys	
245 250 255	
gcc tat gac cct gtg ggc tac ggg atc ccc tac aac cac ctg ctc ttc	816
Ala Tyr Asp Pro Val Gly Tyr Gly Ile Pro Tyr Asn His Leu Leu Phe	
260 265 270	
tct gac tac ccg gaa ccc ctg gtg gag gag gct gcc cag gtg ctc att	864
Ser Asp Tyr Arg Glu Pro Leu Val Glu Glu Ala Ala Gln Val Leu Ile	
275 280 285	

gtc act ttg gac cac gac agt gcc agc agt gcc agc ccc act gtg gac Val Thr Leu Asp His Asp Ser Ala Ser Ser Ala Ser Pro Thr Val Asp 290 295 300	912
ggc acc acc act ggc acc gcc atg gat gat gct gat cct cca ggc cct Gly Thr Thr Thr Gly Thr Ala Met Asp Asp Ala Asp Pro Pro Gly Pro 305 310 315 320	960
gag aac ctg ttt gtg aac tac ctg tcc cgc atc cat cgt gag gag gac Glu Asn Leu Phe Val Asn Tyr Leu Ser Arg Ile His Arg Glu Glu Asp 325 330 335	1008
ttc cag ttc atc ctc aag ggt ata gcc cgg ctg ctg tcc aac ccc ctg Phe Gln Phe Ile Leu Lys Gly Ile Ala Arg Leu Leu Ser Asn Pro Leu 340 345 350	1056
ctc cag acc tac ctg cct aac tcc acc aag aag atc cag ttc cac cag Leu Gln Thr Tyr Leu Pro Asn Ser Thr Lys Lys Ile Gln Phe His Gln 355 360 365	1104
gag ctg cta gtt ctc ttc tgg aag ctc tgc gac ttc aac aag aaa ttc Glu Leu Leu Val Leu Phe Trp Lys Leu Cys Asp Phe Asn Lys Lys Phe 370 375 380	1152
ctc ttc ttc gtg ctg aag agc agc gac gtc cta gac atc ctt gtc ccc Leu Phe Phe Val Leu Lys Ser Ser Asp Val Leu Asp Ile Leu Val Pro 385 390 395 400	1200
atc ctc ttc ttc ctc aac gat gcc cgg gcc gat cag tct cgg gtg ggc Ile Leu Phe Phe Leu Asn Asp Ala Arg Ala Asp Gln Ser Arg Val Gly 405 410 415	1248
ctg atg cac att ggt gtc ttc atc ttg ctg ctt ctg agc ggg gag cgg Leu Met His Ile Gly Val Phe Ile Leu Leu Leu Leu Ser Gly Glu Arg 420 425 430	1296
aac ttc ggg gtg cgg ctg aac aaa ccc tac tca atc cgc gtg ccc atg Asn Phe Gly Val Arg Leu Asn Lys Pro Tyr Ser Ile Arg Val Pro Met 435 440 445	1344
gac atc cca gtc ttc aca ggg acc cac gcc gac ctg ctc att gtg gtg Asp Ile Pro Val Phe Thr Gly Thr His Ala Asp Leu Leu Ile Val Val 450 455 460	1392
ttc cac aag atc atc acc agc ggg cac cag cgg ttg cag ccc ctc ttc Phe His Lys Ile Ile Thr Ser Gly His Gln Arg Leu Gln Pro Leu Phe 465 470 475 480	1440
gac tgc ctg ctc acc atc gtg gtc aac gtg tcc ccc tac ctc aag agc Asp Cys Leu Leu Thr Ile Val Val Asn Val Ser Pro Tyr Leu Lys Ser 485 490 495	1488
ctg tcc atg gtg acc gcc aac aag ttg ctg cac ctg ctg gag gcc ttc Leu Ser Met Val Thr Ala Asn Lys Leu Leu His Leu Leu Glu Ala Phe 500 505 510	1536
tcc acc acc tgg ttc ctc ttc tct gcc gcc cag aac cac cac ctg gtc Ser Thr Thr Trp Phe Leu Phe Ser Ala Ala Gln Asn His His Leu Val 515 520 525	1584
ttc ttc ctc ctg gag gtc ttc aac aac atc atc cag tac cag ttt gat Phe Phe Leu Leu Glu Val Phe Asn Asn Ile Ile Gln Tyr Gln Phe Asp 530 535 540	1632

ggc aac tcc aac ctg gtc tac gcc atc atc cgc aag cgc agc atc ttc	1680
Gly Asn Ser Asn Leu Val Tyr Ala Ile Ile Arg Lys Arg Ser Ile Phe	
545 550 555 560	
cac cag ctg gcc aac ctg ccc acg gac ccg ccc acc att cac aag gcc	1728
His Gln Leu Ala Asn Leu Pro Thr Asp Pro Pro Thr Ile His Lys Ala	
565 570 575	
ctg cag cgg cgc cgg cgg aca cct gag ccc ttg tct cgc acc ggc tcc	1776
Leu Gln Arg Arg Arg Arg Thr Pro Glu Pro Leu Ser Arg Thr Gly Ser	
580 585 590	
cag gag ggc acc tcc atg gag ggc tcc cgc ccc gct gcc cct gca gag	1824
Gln Glu Gly Thr Ser Met Glu Gly Ser Arg Pro Ala Ala Pro Ala Glu	
595 600 605	
cca ggc acc ctc aag acc agt ctg gtg gct act cca ggc att gac aag	1872
Pro Gly Thr Leu Lys Thr Ser Leu Val Ala Thr Pro Gly Ile Asp Lys	
610 615 620	
ctg acc gag aag tcc cag gtg tca gag gat ggc acc ttg cgg tcc ctg	1920
Leu Thr Glu Lys Ser Gln Val Ser Glu Asp Gly Thr Leu Arg Ser Leu	
625 630 635 640	
gaa cct gag ccc cag cag agc ttg gag gat ggc agc ccg gct aag ggg	1968
Glu Pro Glu Pro Gln Gln Ser Leu Glu Asp Gly Ser Pro Ala Lys Gly	
645 650 655	
gag ccc agc cag gca tgg agg gag cag cgg cga ccg tcc acc tca tca	2016
Glu Pro Ser Gln Ala Trp Arg Glu Gln Arg Arg Pro Ser Thr Ser Ser	
660 665 670	
gcc agt ggg cag tgg agc cca acg cca gag tgg gtc ctc tcc tgg aag	2064
Ala Ser Gly Gln Trp Ser Pro Thr Pro Glu Trp Val Leu Ser Trp Lys	
675 680 685	
tcg aag ctg ccg ctg cag acc atc atg agg ctg ctg cag gtg ctg gtt	2112
Ser Lys Leu Pro Leu Gln Thr Ile Met Arg Leu Leu Gln Val Leu Val	
690 695 700	
ccg cag gtg gag aag atc tgc atc gac aag ggc ctg acg gat gag tct	2160
Pro Gln Val Glu Lys Ile Cys Ile Asp Lys Gly Leu Thr Asp Glu Ser	
705 710 715 720	
gag atc ctg cgg ttc ctg cag cat ggc acc ctg gtg ggg ctg ctg ccc	2208
Glu Ile Leu Arg Phe Leu Gln His Gly Thr Leu Val Gly Leu Leu Pro	
725 730 735	
gtg ccc cac ccc atc ctc atc cgc aag tac cag gcc aac tcg ggc act	2256
Val Pro His Pro Ile Leu Ile Arg Lys Tyr Gln Ala Asn Ser Gly Thr	
740 745 750	
gcc atg tgg ttc cgc acc tac atg tgg ggc gtc atc tat ctg agg aat	2304
Ala Met Trp Phe Arg Thr Tyr Met Trp Gly Val Ile Tyr Leu Arg Asn	
755 760 765	
gtg gac ccc cct gtc tgg tac gac acc gac gtg aag ctg ttt gag ata	2352
Val Asp Pro Pro Val Trp Tyr Asp Thr Asp Val Lys Leu Phe Glu Ile	
770 775 780	
cag cgg gtg tga gga tgaagccgac gaggggctca gtctagggga aggcagggcc	2407
Gln Arg Val *	
785	

```

ttgggtccctg aggtctcccc catccaccat tctgagcttt aaattaccac gatcagggcc 2467
tggaacaggc agagtggccc tgagtgtcat gccttagaga ccctgtggc caggacaatg 2527
tgaactggct cagatcccc tcaacccta ggctggactc acaggagccc catctctggg 2587
gctatgcccc caccagagac cactgcccc aacactcgga ctccctcttt aagacctggc 2647
tcagtgtctg ccctcagtg cccacccact cctgtgtctac ccagccccag aggcagaagc 2707
caatgggtca ctgtgcccta aggggtttga ccagggaacc acgggctgtc ccttgagggtg 2767
cctggacagg gtaagggggt gcttcagcc tcctaacca aagccagctg ttccaggctc 2827
caggggaaaa aggtgtggcc aggtgtctcc tcgaggaggc tgggagctgg ccgactgcaa 2887
aagccagact ggggcacctc ccgtatcctt ggggcattgt gtggggtggt gaggtctcc 2947
tgctatattc tcctggatcc gtggaaatag cctggctccc tcttaccag taatgagggg 3007
caggggaagg aactgggagg cagccgttta gtccctcctg ccctgcccac tgccctggatg 3067
gggcgatgcc acccctcctc cttcaccag ctctggcctc tgggtcccac caccagcccc 3127
cccgtgtcag aacaatcttt gctctgtaca atcgccctct ttacaataaa acctcctgt 3187
ccacaaaaaa aaaaaaaaaa a 3208

```

```

<210> 932
<211> 1669
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> CDS
<222> (74)..(1495)

```

```

<220>
<221> misc_feature
<222> (1)...(1669)
<223> n = a,t,c or g

```

```

<400> 932
attgaatgca tgcagggtacc ggtccggaat tcccgggtcg acccacgcgt ccgctcagtt 60
ccagcaggct tgg atg caa aat aaa gtt cca att cct gct cca aat gag 109
Met Gln Asn Lys Val Pro Ile Pro Ala Pro Asn Glu
1 5 10
gtg ctg aat gac aga aaa gaa gac att aaa ttg gaa gag aag aaa aaa 157
Val Leu Asn Asp Arg Lys Glu Asp Ile Lys Leu Glu Lys Lys Lys
15 20 25
aca caa gca gaa att gag caa gaa atg gct aca tta caa tat act aac 205
Thr Gln Ala Glu Ile Glu Gln Glu Met Ala Thr Leu Gln Tyr Thr Asn
30 35 40
cca caa ctt ctg gag caa ctt aaa att gaa aga ctt gca cag aaa caa 253
Pro Gln Leu Leu Glu Gln Leu Lys Ile Glu Arg Leu Ala Gln Lys Gln
45 50 55 60

```

gtt gag caa att cag cct cct ccc tca tct ggc acc cct ctc ctc gga	301
Val Glu Gln Ile Gln Pro Pro Pro Ser Ser Gly Thr Pro Leu Leu Gly	
65 70 75	
ccc cag cct ttt cca gga caa ggt cca atg tct cag att cct caa ggt	349
Pro Gln Pro Phe Pro Gly Gln Gly Pro Met Ser Gln Ile Pro Gln Gly	
80 85 90	
ttt caa cag ccc cat cca tct cag cag atg cca atg aac atg gct caa	397
Phe Gln Gln Pro His Pro Ser Gln Gln Met Pro Met Asn Met Ala Gln	
95 100 105	
atg ggg cct cca ggt cca cag gga cag ttt agg cct cct gga ccc cag	445
Met Gly Pro Pro Gly Pro Gln Gly Gln Phe Arg Pro Pro Gly Pro Gln	
110 115 120	
gga caa atg gga cca caa ggt cct cca ctg cat cag gga ggt ggg ggg	493
Gly Gln Met Gly Pro Gln Gly Pro Pro Leu His Gln Gly Gly Gly Gly	
125 130 135 140	
cca caa gga ttc atg gga cca cag ggg ccc cag ggc ccg ccc cag ggg	541
Pro Gln Gly Phe Met Gly Pro Gln Gly Pro Gln Gly Pro Pro Gln Gly	
145 150 155	
ttg cca cgg cct cag gac atg cat ggg ccc caa gga atg cag agg cat	589
Leu Pro Arg Pro Gln Asp Met His Gly Pro Gln Gly Met Gln Arg His	
160 165 170	
cct gga cct cat ggc cct ttg gga cct caa ggg cca cct gga cca caa	637
Pro Gly Pro His Gly Pro Leu Gly Pro Gln Gly Pro Pro Gly Pro Gln	
175 180 185	
ggg agt tct ggt cct caa ggt cat atg ggt cct cag ggt cca cct ggc	685
Gly Ser Ser Gly Pro Gln Gly His Met Gly Pro Gln Gly Pro Pro Gly	
190 195 200	
cca cag ggt cac ata ggc ccc caa ggc ccg cct ggc cct cag ggt cac	733
Pro Gln Gly His Ile Gly Pro Gln Gly Pro Pro Gly Pro Gln Gly His	
205 210 215 220	
ttg ggc cca cag ggg cct ccg ggt act caa ggt atg cag gga cca cct	781
Leu Gly Pro Gln Gly Pro Pro Gly Thr Gln Gly Met Gln Gly Pro Pro	
225 230 235	
ggg ccc aga gga atg caa ggg cct cct cat cct cat ggg atc caa ggc	829
Gly Pro Arg Gly Met Gln Gly Pro Pro His Pro His Gly Ile Gln Gly	
240 245 250	
gga cca ggg tct caa ggg atc caa ggt cct gtg tct cag gga cct ctg	877
Gly Pro Gly Ser Gln Gly Ile Gln Gly Pro Val Ser Gln Gly Pro Leu	
255 260 265	
atg gga ttg aat cca aga gga atg cag ggg cct cca ggc ccc cgg gag	925
Met Gly Leu Asn Pro Arg Gly Met Gln Gly Pro Pro Gly Pro Arg Glu	
270 275 280	
aac cag ggt cct gct ccc caa ggg atg att atg ggc cac ccg cct caa	973
Asn Gln Gly Pro Ala Pro Gln Gly Met Ile Met Gly His Pro Pro Gln	
285 290 295 300	
gag atg aga gga cct cac cct cca ggt gga cta ctg gga cac ggc cct	1021
Glu Met Arg Gly Pro His Pro Pro Gly Gly Leu Leu Gly His Gly Pro	
305 310 315	

cag gaa atg aga ggt cct cag gag atc cga ggc atg cag ggg cct cca 1069
 Gln Glu Met Arg Gly Pro Gln Glu Ile Arg Gly Met Gln Gly Pro Pro
 320 325 330

 ccc caa gga tca atg ctg gga cct ccc cag gaa ttg cga ggg cct cca 1117
 Pro Gln Gly Ser Met Leu Gly Pro Pro Gln Glu Leu Arg Gly Pro Pro
 335 340 345

 ggc tca caa agt cag cag ggg ccg ccc cag ggc tct tta gga cct cca 1165
 Gly Ser Gln Ser Gln Gln Gly Pro Pro Gln Gly Ser Leu Gly Pro Pro
 350 355 360

 ccc cag ggt ggc atg caa gga ccc ccc gga cct cag gga cag cag aac 1213
 Pro Gln Gly Gly Met Gln Gly Pro Pro Gly Pro Gln Gly Gln Gln Asn
 365 370 375 380

 cca gca aga ggg cca cat cca tct caa ggg cca ata cca ttc cag caa 1261
 Pro Ala Arg Gly Pro His Pro Ser Gln Gly Pro Ile Pro Phe Gln Gln
 385 390 395

 cag aaa acg cct ctg cta ggt gat ggg ccc cgg gcc ccc ttc aac cag 1309
 Gln Lys Thr Pro Leu Leu Gly Asp Gly Pro Arg Ala Pro Phe Asn Gln
 400 405 410

 gaa gga cag agc aca ggc ccc cca ccc ctg ata cca ggc cta ggg cag 1357
 Glu Gly Gln Ser Thr Gly Pro Pro Pro Leu Ile Pro Gly Leu Gly Gln
 415 420 425

 cag gga gca caa ggt cgc att ccc cct ctg aac ccc gga caa gga cct 1405
 Gln Gly Ala Gln Gly Arg Ile Pro Pro Leu Asn Pro Gly Gln Gly Pro
 430 435 440

 ggc ccc aac aaa gtt tca gaa gag gag ccc cgc cga ggc atg agg gcc 1453
 Gly Pro Asn Lys Val Ser Glu Glu Glu Pro Arg Arg Gly Met Arg Ala
 445 450 455 460

 gtg ctc ccc cca gag gaa ggg atg gtt ttc ctg gtc cta tga agacttt 1502
 Val Leu Pro Pro Glu Glu Gly Met Val Phe Leu Val Leu *
 465 470

 agtcnagag gagaattttt gatgcttatg aggggaagcgg gcccgaggac gagatcttca 1562
 gaaggtcgag gtcgggggtac cccacgaagg aggggaaggaa ggggtttactt cccactcctg 1622
 acgagttccc tcgctttgat gagggcggaa gccacattcc tgcgatg 1669

<210> 933
 <211> 1087
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (46)..(963)

<400> 933
 taagcttgcg gccgcggcg ggccggggccc gcgcacagcg cccgc atg tac aac 54
 Met Tyr Asn
 1
 atg atg gag acg gag ctg aag ccg ccg ggc ccg cag caa act tcg ggg 102

Met	Met	Glu	Thr	Glu	Leu	Lys	Pro	Pro	Gly	Pro	Gln	Gln	Thr	Ser	Gly		
	5					10					15						
ggc	ggc	ggc	ggc	aac	tcc	acc	gcg	gcg	gcg	gcc	ggc	ggc	aac	cag	aaa		150
Gly	Gly	Gly	Gly	Asn	Ser	Thr	Ala	Ala	Ala	Ala	Gly	Gly	Asn	Gln	Lys		
	20				25					30					35		
aac	agc	ccg	gac	cgc	gtc	aag	cgg	ccc	atg	aat	gcc	ttc	atg	gtg	tgg		198
Asn	Ser	Pro	Asp	Arg	Val	Lys	Arg	Pro	Met	Asn	Ala	Phe	Met	Val	Trp		
				40					45					50			
tcc	cgc	ggg	cag	cgg	cgc	aag	atg	gcc	cag	gag	aac	ccc	aag	atg	cac		246
Ser	Arg	Gly	Gln	Arg	Arg	Lys	Met	Ala	Gln	Glu	Asn	Pro	Lys	Met	His		
			55					60					65				
aac	tcg	gag	atc	agc	aag	cgc	ctg	ggc	gcc	gag	tgg	aaa	ctt	ttg	tcg		294
Asn	Ser	Glu	Ile	Ser	Lys	Arg	Leu	Gly	Ala	Glu	Trp	Lys	Leu	Leu	Ser		
		70					75					80					
gag	acg	gag	aag	cgg	ccg	ttc	atc	gac	gag	gct	aag	cgg	ctg	cga	gcg		342
Glu	Thr	Glu	Lys	Arg	Pro	Phe	Ile	Asp	Glu	Ala	Lys	Arg	Leu	Arg	Ala		
		85				90					95						
ctg	cac	atg	aag	gag	cac	ccg	gat	tat	aaa	tac	cgg	ccc	cgg	cgg	aaa		390
Leu	His	Met	Lys	Glu	His	Pro	Asp	Tyr	Lys	Tyr	Arg	Pro	Arg	Arg	Lys		
		100			105				110						115		
acc	aag	acg	ctc	atg	aag	aag	gat	aag	tac	acg	ctg	ccc	ggc	ggg	ctg		438
Thr	Lys	Thr	Leu	Met	Lys	Lys	Asp	Lys	Tyr	Thr	Leu	Pro	Gly	Gly	Leu		
			120						125					130			
ctg	gcc	ccc	ggc	ggc	aat	agc	atg	gcg	agc	ggg	gtc	ggg	gtg	ggc	gcc		486
Leu	Ala	Pro	Gly	Gly	Asn	Ser	Met	Ala	Ser	Gly	Val	Gly	Val	Gly	Ala		
			135					140					145				
ggc	ctg	ggc	gcg	ggc	gtg	aac	cag	cgc	atg	gac	agt	tac	gcg	cac	atg		534
Gly	Leu	Gly	Ala	Gly	Val	Asn	Gln	Arg	Met	Asp	Ser	Tyr	Ala	His	Met		
		150					155					160					
aac	ggc	tgg	agc	aac	ggc	agc	tac	agc	atg	atg	cag	gac	cag	ctg	ggc		582
Asn	Gly	Trp	Ser	Asn	Gly	Ser	Tyr	Ser	Met	Met	Gln	Asp	Gln	Leu	Gly		
		165				170					175						
tac	ccg	cag	cac	ccg	ggc	ctc	aat	gcg	cac	ggc	gca	gcg	cag	atg	cag		630
Tyr	Pro	Gln	His	Pro	Gly	Leu	Asn	Ala	His	Gly	Ala	Ala	Gln	Met	Gln		
		180			185					190					195		
ccc	atg	cac	cgc	tac	gac	gtg	agc	gcc	ctg	cag	tac	aac	tcc	atg	acc		678
Pro	Met	His	Arg	Tyr	Asp	Val	Ser	Ala	Leu	Gln	Tyr	Asn	Ser	Met	Thr		
				200					205					210			
agc	atg	tcc	tac	tcg	cag	cag	ggc	acc	cct	ggc	atg	gct	ctt	ggc	tcc		726
Ser	Met	Ser	Tyr	Ser	Gln	Gln	Gly	Thr	Pro	Gly	Met	Ala	Leu	Gly	Ser		
			215					220					225				
atg	ggt	tcg	gtg	gtc	aag	tcc	gag	gcc	agc	tcc	agc	ccc	cct	gtg	gtt		774
Met	Gly	Ser	Val	Val	Lys	Ser	Glu	Ala	Ser	Ser	Ser	Pro	Pro	Val	Val		
		230					235					240					
acc	tct	tcc	tcc	cac	tcc	agg	gcg	ccc	tgc	cag	gcc	ggg	gac	ctc	cgg		822
Thr	Ser	Ser	Ser	His	Ser	Arg	Ala	Pro	Cys	Gln	Ala	Gly	Asp	Leu	Arg		
		245				250					255						
gac	atg	atc	agc	atg	tat	ctc	ccc	ggc	gcc	gag	gtg	ccg	gaa	ccc	gcc		870


```

Asp Met Ile Ser Met Tyr Leu Pro Gly Ala Glu Val Pro Glu Pro Ala
260                               265                               270                               275

gcc ccc agc aga ctt cac atg tcc cag cac tac cag agc ggc ccg gtg      918
Ala Pro Ser Arg Leu His Met Ser Gln His Tyr Gln Ser Gly Pro Val
                               280                               285                               290

ccc ggc acg gcc att aac ggc aca ctg ccc ctc tca cac atg tga ggg      966
Pro Gly Thr Ala Ile Asn Gly Thr Leu Pro Leu Ser His Met *
                               295                               300                               305

ccggacagcg aactggaggg gggagaaatt ttcaaagaaa aacgagggaa atgggagggg 1026

tgcaaaagag gagagtaaga aacagcatgg agaaaacccg gtacgctcaa aaagaaaaaa 1086

a                                                                    1087

<210> 934
<211> 2182
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (21)..(1868)

<400> 934
aagcctacct tgcaggctca      atg gaa aca aca tta gcc att tct acc aca      50
                               Met Glu Thr Thr Leu Ala Ile Ser Thr Thr
                               1                               5                               10

aca cca ggc cta agt gca aaa ggg ggc att ctt tac agt agc tcc aga      98
Thr Pro Gly Leu Ser Ala Lys Gly Gly Ile Leu Tyr Ser Ser Ser Arg
                               15                               20                               25

tct cca gaa gag aca ctc tca cct gcc agc atg aga agc tcc agc atc      146
Ser Pro Glu Glu Thr Leu Ser Pro Ala Ser Met Arg Ser Ser Ser Ile
                               30                               35                               40

agt gga gaa ccc acc agc ttg tat agc caa gca gag tca aca cac aca      194
Ser Gly Glu Pro Thr Ser Leu Tyr Ser Gln Ala Glu Ser Thr His Thr
                               45                               50                               55

aca gcg ttc cct gcc agc acc acc acc tca ggc ctc agt cag gaa tca      242
Thr Ala Phe Pro Ala Ser Thr Thr Thr Ser Gly Leu Ser Gln Glu Ser
                               60                               65                               70

aca act ttc cac agt aag cca ggc tca act gag aca aca ctg tcc cct      290
Thr Thr Phe His Ser Lys Pro Gly Ser Thr Glu Thr Thr Leu Ser Pro
                               75                               80                               85                               90

ggc agc atc aca act tca tct ttt gct caa gaa ttt acc acc cct cat      338
Gly Ser Ile Thr Thr Ser Ser Phe Ala Gln Glu Phe Thr Thr Pro His
                               95                               100                               105

agc caa cca ggc tca gct ctg tca aca gtg tca cct gcc agc acc aca      386
Ser Gln Pro Gly Ser Ala Leu Ser Thr Val Ser Pro Ala Ser Thr Thr
                               110                               115                               120

gtg cca ggc ctt agt gag gaa tct acc acc ttc tac agc agc cca ggc      434
Val Pro Gly Leu Ser Glu Glu Ser Thr Thr Phe Tyr Ser Ser Pro Gly

```

125	130	135	
tca act gaa acc aca gcg ttt tct cac agc aac aca atg tcc att cat			482
Ser Thr Glu Thr Thr Ala Phe Ser His Ser Asn Thr Met Ser Ile His			
140	145	150	
agt caa caa tct aca ccc ttc cct gac agc cca ggc ttc act cac aca			530
Ser Gln Gln Ser Thr Pro Phe Pro Asp Ser Pro Gly Phe Thr His Thr			
155	160	165	170
gtg tta cct gcc acc ctc aca acc aca gac att ggt cag gaa tca aca			578
Val Leu Pro Ala Thr Leu Thr Thr Thr Asp Ile Gly Gln Glu Ser Thr			
	175	180	185
gcc ttc cac agc agc tca gac gca act gga aca aca ccc tta cct gcc			626
Ala Phe His Ser Ser Ser Asp Ala Thr Gly Thr Thr Pro Leu Pro Ala			
	190	195	200
cgc tcc aca gcc tca gac ctt gtt gga gaa cct aca act ttc tac atc			674
Arg Ser Thr Ala Ser Asp Leu Val Gly Glu Pro Thr Phe Tyr Ile			
	205	210	215
agc cca tcc cct act tac aca aca ctc ttt cct gcg agt tcc agc aca			722
Ser Pro Ser Pro Thr Tyr Thr Thr Leu Phe Pro Ala Ser Ser Ser Thr			
	220	225	230
tca ggc ctc act gag gaa tct acc acc ttc cac acc agt cca agc ttc			770
Ser Gly Leu Thr Glu Glu Ser Thr Thr Phe His Thr Ser Pro Ser Phe			
235	240	245	250
act tct aca att gtg tct act gaa agc ctg gaa acc tta gca cca ggg			818
Thr Ser Thr Ile Val Ser Thr Glu Ser Leu Glu Thr Leu Ala Pro Gly			
	255	260	265
ttg tgc cag gaa gga caa att tgg aat gga aaa caa tgc gtc tgt ccc			866
Leu Cys Gln Glu Gly Gln Ile Trp Asn Gly Lys Gln Cys Val Cys Pro			
	270	275	280
caa ggc tac gtt ggt tac cag tgc ttg tcc cct ctg gaa tcc ttc cct			914
Gln Gly Tyr Val Gly Tyr Gln Cys Leu Ser Pro Leu Glu Ser Phe Pro			
	285	290	295
gta gaa acc ccg gaa aaa ctc aac gcc act tta ggt atg aca gtg aaa			962
Val Glu Thr Pro Glu Lys Leu Asn Ala Thr Leu Gly Met Thr Val Lys			
	300	305	310
gtg act tac aga aat ttc aca gaa aag atg aat gac gca tcc tcc cag			1010
Val Thr Tyr Arg Asn Phe Thr Glu Lys Met Asn Asp Ala Ser Ser Gln			
315	320	325	330
gaa tac cag aac ttc agt acc ctc ttc aag aat cgg atg gat gtc gtt			1058
Glu Tyr Gln Asn Phe Ser Thr Leu Phe Lys Asn Arg Met Asp Val Val			
	335	340	345
ttg aag ggc gac aat ctt cct cag tat aga ggg gtg aac att cgg aga			1106
Leu Lys Gly Asp Asn Leu Pro Gln Tyr Arg Gly Val Asn Ile Arg Arg			
	350	355	360
ttg ctc aac ggt agc atc gtg gtc aag aac gat gtc atc ctg gag gca			1154
Leu Leu Asn Gly Ser Ile Val Val Lys Asn Asp Val Ile Leu Glu Ala			
	365	370	375
gac tac act tta gag tat gag gaa ctg ttt gaa aac ctg gca gag att			1202
Asp Tyr Thr Leu Glu Tyr Glu Glu Leu Phe Glu Asn Leu Ala Glu Ile			

380

385

390

gta aag gcc aag att atg aat gaa act aga aca act ctt ctt gat cct Val Lys Ala Lys Ile Met Asn Glu Thr Arg Thr Thr Leu Leu Asp Pro 395 400 405 410	1250
gat tcc tgc aga aag gcc ata ctg tgc tat agt gaa gag gac act ttc Asp Ser Cys Arg Lys Ala Ile Leu Cys Tyr Ser Glu Glu Asp Thr Phe 415 420 425	1298
gtg gat tca tcg gtg act ccg ggc ttt gac ttc cag gag caa tgc acc Val Asp Ser Ser Val Thr Pro Gly Phe Asp Phe Gln Glu Gln Cys Thr 430 435 440	1346
cag aag gct gcc gaa gga tat acc cag ttc tac tat gtg gat gtc ttg Gln Lys Ala Ala Glu Gly Tyr Thr Gln Phe Tyr Tyr Val Asp Val Leu 445 450 455	1394
gat ggg aag ctg gcc tgt gtg aac aag tgc acc aaa gga acg aag tcg Asp Gly Lys Leu Ala Cys Val Asn Lys Cys Thr Lys Gly Thr Lys Ser 460 465 470	1442
caa atg aac tgt aac ctg ggc aca tgt cag ctg caa cgc agt ggc ccc Gln Met Asn Cys Asn Leu Gly Thr Cys Gln Leu Gln Arg Ser Gly Pro 475 480 485 490	1490
cgc tgc ctg tgc cca aat acg aac aca cac tgg tac tgg gga gag acc Arg Cys Leu Cys Pro Asn Thr Asn Thr His Trp Tyr Trp Gly Glu Thr 495 500 505	1538
tgt gaa ttc aac atc gcc aag agc ctc gtg tat ggg atc gtg ggg gct Cys Glu Phe Asn Ile Ala Lys Ser Leu Val Tyr Gly Ile Val Gly Ala 510 515 520	1586
gtg atg gcg gtg ctg ctg ctc gca ttg atc atc cta atc atc tta ttc Val Met Ala Val Leu Leu Leu Ala Leu Ile Ile Leu Ile Ile Leu Phe 525 530 535	1634
agc cta tcc cag aga aaa cgg cac agg gaa cag tat gat gtg cct caa Ser Leu Ser Gln Arg Lys Arg His Arg Glu Gln Tyr Asp Val Pro Gln 540 545 550	1682
gag tgg cga aag gaa ggc acc cct ggc atc ttc cag aag acg gcc atc Glu Trp Arg Lys Glu Gly Thr Pro Gly Ile Phe Gln Lys Thr Ala Ile 555 560 565 570	1730
tgg gaa gac cag aat ctg agg gag agc aga ttc ggc ctt gag aac gcc Trp Glu Asp Gln Asn Leu Arg Glu Ser Arg Phe Gly Leu Glu Asn Ala 575 580 585	1778
tac aac aac ttc cgg ccc acc ctg gag act gtt gac tct ggc aca gag Tyr Asn Asn Phe Arg Pro Thr Leu Glu Thr Val Asp Ser Gly Thr Glu 590 595 600	1826
ctc cac atc cag agg ccg gag atg gta gca tcc cct gtg tga gccaacg Leu His Ile Gln Arg Pro Glu Met Val Ala Ser Pro Val *	1875
605 610 615	
ggggcctccc accctcatct agctttgttc aggaaagctg caaacacaaa gcccccccca	1935
agcctccggg gcgggtcaaa aggagaccga agtcaggccc tgaaaccggt cctgctttga	1995
gctgacaaac ttggccagtc ccctgcctgt gctcctgctg gggaaggctg ggggctgtaa	2055

gcctttccat ccgggagctt ccaaactccc aaaagcctcg gcacccctgt ttcctcctgg 2115
 gtggctcccc cctttggaat ttcctacca ataaaagcaa atttgaaagc tcaaaaaaaaa 2175
 aaaaaaa 2182

<210> 935
 <211> 1295
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (226)..(990)

<400> 935
 cccgggtcga cccacgcgtc cgctcacggc ctagaaactg cgcattcgga actccccag 60
 caagactctc tgcttggttc tctcccatct gccacaccac aggctcaggt ggaagcagaa 120
 ggccccactc ctggaaaatc ggcacctcca aggggctctc ctcccagggg ggctcagcct 180
 ggggctggag caggacccca ggaacccacg caaacccctc ccacc atg gct gag 234
 Met Ala Glu
 1
 cag gaa gcc caa ccc agg cca tcc ctc acg act gct cac gca aaa aaa 282
 Gln Glu Ala Gln Pro Arg Pro Ser Leu Thr Thr Ala His Ala Lys Lys
 5 10 15
 caa ggc ccg cct cac tcc agg gaa cca agg gca gag agc agg ctt gaa 330
 Gln Gly Pro Pro His Ser Arg Glu Pro Arg Ala Glu Ser Arg Leu Glu
 20 25 30 35
 gat cca gga atg gac tcc agg gaa gct ggg ctg acc cca tcc ccg gga 378
 Asp Pro Gly Met Asp Ser Arg Glu Ala Gly Leu Thr Pro Ser Pro Gly
 40 45 50
 gac ccc atg gct gga ggg gga ccc cag gcc aac cct gat tac ctc ttc 426
 Asp Pro Met Ala Gly Gly Gly Pro Gln Ala Asn Pro Asp Tyr Leu Phe
 55 60 65
 cat gtc atc ttt ctg gga gac tcc aac gtg ggc aaa aca tcc ttc ctg 474
 His Val Ile Phe Leu Gly Asp Ser Asn Val Gly Lys Thr Ser Phe Leu
 70 75 80
 cac ctg ctg cac cag aat tct ttc gcc acc gga ttg aca gct acc gtg 522
 His Leu Leu His Gln Asn Ser Phe Ala Thr Gly Leu Thr Ala Thr Val
 85 90 95
 gga gta gat ttt cgg gtc aaa acc ttg ctg gtg gac aac aag tgc ttt 570
 Gly Val Asp Phe Arg Val Lys Thr Leu Leu Val Asp Asn Lys Cys Phe
 100 105 110 115
 gtg ctg cag ctc tgg gac aca gct ggc caa gag agg tac cac agt atg 618
 Val Leu Gln Leu Trp Asp Thr Ala Gly Gln Glu Arg Tyr His Ser Met
 120 125 130
 acg cga cag ctg ctc cgc aag gct gac ggg gtg gtg ctc atg tac gac 666
 Thr Arg Gln Leu Leu Arg Lys Ala Asp Gly Val Val Leu Met Tyr Asp
 135 140 145

```

atc acc tcc cag gag agc ttt gcc cac gtg cgc tac tgg cta gac tgt      714
Ile Thr Ser Gln Glu Ser Phe Ala His Val Arg Tyr Trp Leu Asp Cys
      150                      155                      160

ctc cag gat gca ggg tcg gat ggg gtg gtc atc ctt ctc ctg gga aac      762
Leu Gln Asp Ala Gly Ser Asp Gly Val Val Ile Leu Leu Leu Gly Asn
      165                      170                      175

aag atg gac tgt gag gag gaa cgg caa gtg tcc gtg gaa gct ggg cag      810
Lys Met Asp Cys Glu Glu Glu Arg Gln Val Ser Val Glu Ala Gly Gln
      180                      185                      190                      195

caa ctg gcc cag gaa ctg ggg gtc tat ttt ggg gag tgc agt gcc gcc      858
Gln Leu Ala Gln Glu Leu Gly Val Tyr Phe Gly Glu Cys Ser Ala Ala
      200                      205                      210

ttg ggt cac aac atc ctg gag cct gta gta aac ctg gcc agg tca ctc      906
Leu Gly His Asn Ile Leu Glu Pro Val Val Asn Leu Ala Arg Ser Leu
      215                      220                      225

agg atg caa gaa gaa ggc ctg aag ggc tcg ctg gtg aag gtg gcc ccc      954
Arg Met Gln Glu Glu Gly Leu Lys Gly Ser Leu Val Lys Val Ala Pro
      230                      235                      240

aag agg ccg ccc aag aga ttc ggc tgt tgc tcc tga tcac ctgtcctgtc      1004
Lys Arg Pro Pro Lys Arg Phe Gly Cys Cys Ser *
      245                      250                      255

ctgggtagga tggacaccca tgggggtttcc tgtccctcag ctccctgtcct ttgttcttgg      1064

acagcaacga cacagaggac cagcttgag gttcaggaaa acccttctca actcaggact      1124

cggatcccag agcagggccg catcacctct gcctttcaca ctccaaagga gggctttgtc      1184

gagtgaacaa ggcttgaggg gcaggggtat ggcaaaactc tccaaacaaa gaaagtctag      1244

aaaaacgact taaggaaaat acacaaaat attggccgca aaaaaaaaaa a      1295

```

<210> 936
 <211> 2940
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (28)..(2883)

```

<400> 936
cgaactgcta cagaatgtga cgttcgt      atg agc aag tct aag tca gac aat      51
Met Ser Lys Ser Lys Ser Asp Asn
      1                      5

cag atc agt gac aga gct gct ttg gag gcc aaa gtg aag gat ctt ctc      99
Gln Ile Ser Asp Arg Ala Ala Leu Glu Ala Lys Val Lys Asp Leu Leu
      10                      15                      20

acg ctg gca aaa acc aaa gac gta gaa att tta cat ttg aga aat gaa      147
Thr Leu Ala Lys Thr Lys Asp Val Glu Ile Leu His Leu Arg Asn Glu
      25                      30                      35                      40

```

ctg cga gac atg cgt gcc cag ctg ggc att aat gag gat cat tct gag	195
Leu Arg Asp Met Arg Ala Gln Leu Gly Ile Asn Glu Asp His Ser Glu	
45 50 55	
ggt gat gaa aaa tct gag aag gaa act att atg gct cac cag ccg act	243
Gly Asp Glu Lys Ser Glu Lys Glu Thr Ile Met Ala His Gln Pro Thr	
60 65 70	
gat gtg gag tcc act tta ttg cag ttg cag gaa cag aat act gcc atc	291
Asp Val Glu Ser Thr Leu Leu Gln Leu Gln Glu Gln Asn Thr Ala Ile	
75 80 85	
cgt gaa gaa ctc aac cag ctg aaa aat gaa aac aga atg tta aag gac	339
Arg Glu Glu Leu Asn Gln Leu Lys Asn Glu Asn Arg Met Leu Lys Asp	
90 95 100	
agg ttg aat gca ttg ggc ttt tcc cta gag cag agg tta gac aat tct	387
Arg Leu Asn Ala Leu Gly Phe Ser Leu Glu Gln Arg Leu Asp Asn Ser	
105 110 115 120	
gaa aaa ctg ttt ggc tat cag tcc ctg agc cca gaa atc acc cct ggt	435
Glu Lys Leu Phe Gly Tyr Gln Ser Leu Ser Pro Glu Ile Thr Pro Gly	
125 130 135	
aac cag agc gat gga gga gga act ctg act tct tca gtg gaa ggc tct	483
Asn Gln Ser Asp Gly Gly Gly Thr Leu Thr Ser Ser Val Glu Gly Ser	
140 145 150	
gcc cct ggc tca gtg gag gat ctc ttg agt cag gat gaa aat aca cta	531
Ala Pro Gly Ser Val Glu Asp Leu Leu Ser Gln Asp Glu Asn Thr Leu	
155 160 165	
atg gac cat cag cac agt aac tcc atg gac aat tta gac agt gag tgc	579
Met Asp His Gln His Ser Asn Ser Met Asp Asn Leu Asp Ser Glu Cys	
170 175 180	
agt gag gtc tac cag ccc ctc aca tcg agc gat gat gcg ctg gat gca	627
Ser Glu Val Tyr Gln Pro Leu Thr Ser Ser Asp Asp Ala Leu Asp Ala	
185 190 195 200	
cca tcc tcc tca gag tcg gaa ggc atc ccc agc ata gag cgc tcc cgg	675
Pro Ser Ser Ser Glu Ser Glu Gly Ile Pro Ser Ile Glu Arg Ser Arg	
205 210 215	
aag ggg agc agc ggg aat gcc agt gaa gtg tcc gtg gct tgc ctg act	723
Lys Gly Ser Ser Gly Asn Ala Ser Glu Val Ser Val Ala Cys Leu Thr	
220 225 230	
gaa cgg ata cac cag atg gaa gag aac caa cac agt aca agt gag gaa	771
Glu Arg Ile His Gln Met Glu Glu Asn Gln His Ser Thr Ser Glu Glu	
235 240 245	
ctc cag gca acc ctg caa gag cta gct gat tta cag cag att acc cag	819
Leu Gln Ala Thr Leu Gln Glu Leu Ala Asp Leu Gln Gln Ile Thr Gln	
250 255 260	
gaa ctg aat agt gaa aac gaa agg ctt gga gaa gag aag gtt att ctg	867
Glu Leu Asn Ser Glu Asn Glu Arg Leu Gly Glu Glu Lys Val Ile Leu	
265 270 275 280	
atg gag tct tta tgt cag cag agc gat aag ttg gaa cac ttt agt cga	915
Met Glu Ser Leu Cys Gln Gln Ser Asp Lys Leu Glu His Phe Ser Arg	
285 290 295	

cag att gaa tac ttc cgc tct ctt cta gat gag cat cac att tct tat	963
Gln Ile Glu Tyr Phe Arg Ser Leu Leu Asp Glu His His Ile Ser Tyr	
300 305 310	
gtc ata gat gaa gat gta aaa agt ggg cgc tat atg gaa tta gag caa	1011
Val Ile Asp Glu Asp Val Lys Ser Gly Arg Tyr Met Glu Leu Glu Gln	
315 320 325	
cgt tac atg gac ctc gct gag aat gcc cgt ttt gaa cgg gag cag ctt	1059
Arg Tyr Met Asp Leu Ala Glu Asn Ala Arg Phe Glu Arg Glu Gln Leu	
330 335 340	
ctt ggt gtc cag cag cat tta agc aat act ttg aaa atg gca gaa caa	1107
Leu Gly Val Gln Gln His Leu Ser Asn Thr Leu Lys Met Ala Glu Gln	
345 350 355 360	
gac aat aag gaa gct caa gaa atg ata ggg gca ctc aaa gaa cgc agt	1155
Asp Asn Lys Glu Ala Gln Glu Met Ile Gly Ala Leu Lys Glu Arg Ser	
365 370 375	
cac cat atg gag cga att att gag tct gag cag aaa gga aaa gca gcc	1203
His His Met Glu Arg Ile Ile Glu Ser Glu Gln Lys Gly Lys Ala Ala	
380 385 390	
ttg gca gcc acg tta gag gaa tac aaa gcc aca gtg gcc agt gac cag	1251
Leu Ala Ala Thr Leu Glu Glu Tyr Lys Ala Thr Val Ala Ser Asp Gln	
395 400 405	
ata gag atg aat cgc ctg aag gct cag ctg gag aat gaa aag cag aaa	1299
Ile Glu Met Asn Arg Leu Lys Ala Gln Leu Glu Asn Glu Lys Gln Lys	
410 415 420	
gtg gca gag ctg tat tct atc cat aac tct gga gac aaa tct gat att	1347
Val Ala Glu Leu Tyr Ser Ile His Asn Ser Gly Asp Lys Ser Asp Ile	
425 430 435 440	
cag gac ctc ctg gag agt gtc agg ctg gac aaa gaa aaa gca gag act	1395
Gln Asp Leu Leu Glu Ser Val Arg Leu Asp Lys Glu Lys Ala Glu Thr	
445 450 455	
ttg gct agt agc ttg cag gaa gat ctg gct cat acc cga aat gat gcc	1443
Leu Ala Ser Ser Leu Gln Glu Asp Leu Ala His Thr Arg Asn Asp Ala	
460 465 470	
aat cga tta cag gat gcc att gct aag gta gag gat gaa tac cga gcc	1491
Asn Arg Leu Gln Asp Ala Ile Ala Lys Val Glu Asp Glu Tyr Arg Ala	
475 480 485	
ttc caa gaa gaa gct aag aaa caa att gaa gat ttg aat atg acg tta	1539
Phe Gln Glu Glu Ala Lys Lys Gln Ile Glu Asp Leu Asn Met Thr Leu	
490 495 500	
gaa aaa tta aga tca gac ctg gat gaa aaa gaa aca gaa agg agt gac	1587
Glu Lys Leu Arg Ser Asp Leu Asp Glu Lys Glu Thr Glu Arg Ser Asp	
505 510 515 520	
atg aaa gaa acc atc ttt gaa ctt gaa gat gaa gta gaa caa cat cgt	1635
Met Lys Glu Thr Ile Phe Glu Leu Glu Asp Glu Val Glu Gln His Arg	
525 530 535	
gct gtg aaa ctt cat gac aac ctc att att tct gat cta gag aat aca	1683
Ala Val Lys Leu His Asp Asn Leu Ile Ile Ser Asp Leu Glu Asn Thr	
540 545 550	

gtt aaa aaa ctc cag gac caa aag cac gac atg gaa aga gaa ata aag Val Lys Lys Leu Gln Asp Gln Lys His Asp Met Glu Arg Glu Ile Lys 555 560 565	1731
aca ctc cac aga aga ctt cgg gaa gaa tct gcg gaa tgg cgg cag ttt Thr Leu His Arg Arg Leu Arg Glu Glu Ser Ala Glu Trp Arg Gln Phe 570 575 580	1779
cag gct gat ctc cag act gca gta gtc att gca aat gac att aaa tct Gln Ala Asp Leu Gln Thr Ala Val Val Ile Ala Asn Asp Ile Lys Ser 585 590 595 600	1827
gaa gcc caa gag gag att ggt gat cta aag cgc cgg tta cat gag gct Glu Ala Gln Glu Glu Ile Gly Asp Leu Lys Arg Arg Leu His Glu Ala 605 610 615	1875
caa gaa aaa aat gag aaa ctc aca aaa gaa ttg gag gaa ata aag tca Gln Glu Lys Asn Glu Lys Leu Thr Lys Glu Leu Glu Glu Ile Lys Ser 620 625 630	1923
cgc aag caa gag gag gag cga ggc cgg gta tac aat tac atg aat gcc Arg Lys Gln Glu Glu Glu Arg Gly Arg Val Tyr Asn Tyr Met Asn Ala 635 640 645	1971
gtt gag aga gat ttg gca gcc tta agg cag gga atg gga ctg agt aga Val Glu Arg Asp Leu Ala Ala Leu Arg Gln Gly Met Gly Leu Ser Arg 650 655 660	2019
agg tcc tcg act tcc tca gag cca act cct aca gta aaa acc ctc atc Arg Ser Ser Thr Ser Ser Glu Pro Thr Pro Thr Val Lys Thr Leu Ile 665 670 675 680	2067
aag tcc ttt gac agt gca tct caa gta cca aac cct gct gca gct gca Lys Ser Phe Asp Ser Ala Ser Gln Val Pro Asn Pro Ala Ala Ala Ala 685 690 695	2115
att cct cga acg ccc ctg agc cca agt cct atg aaa acc cct cct gca Ile Pro Arg Thr Pro Leu Ser Pro Ser Pro Met Lys Thr Pro Pro Ala 700 705 710	2163
gca gct gtg tcc cct atg cag aga cat tcc ata agt gga cca atc tca Ala Ala Val Ser Pro Met Gln Arg His Ser Ile Ser Gly Pro Ile Ser 715 720 725	2211
aca tcc aaa ccc ctg aca gcc ctg tca gat aag aga cca aac tat ggg Thr Ser Lys Pro Leu Thr Ala Leu Ser Asp Lys Arg Pro Asn Tyr Gly 730 735 740	2259
gaa atc cct gtt caa gag cat ctg tta aga aca tct tca gcc agc cgg Glu Ile Pro Val Gln Glu His Leu Leu Arg Thr Ser Ser Ala Ser Arg 745 750 755 760	2307
cct gct tcc ctg cca aga gtg cct gcg atg gaa agt gcc aag acc ctc Pro Ala Ser Leu Pro Arg Val Pro Ala Met Glu Ser Ala Lys Thr Leu 765 770 775	2355
tca gtg tct cga cga agt agt gaa gaa atg aaa cgg gac att tct gca Ser Val Ser Arg Arg Ser Ser Glu Glu Met Lys Arg Asp Ile Ser Ala 780 785 790	2403
cag gag gga gcg tcg cca gcc tct ctg atg gct atg gga acc acg tct Gln Glu Gly Ala Ser Pro Ala Ser Leu Met Ala Met Gly Thr Thr Ser 795 800 805	2451


```

cca cag ctt tcc ctg tcc tct tct cca acg gca tct gtg act ccc acc      2499
Pro Gln Leu Ser Leu Ser Ser Ser Pro Thr Ala Ser Val Thr Pro Thr
      810                      815                      820

acc cga agc cga ata aga gaa gaa agg aaa gac cct ctc tca gca ttg      2547
Thr Arg Ser Arg Ile Arg Glu Glu Arg Lys Asp Pro Leu Ser Ala Leu
825                      830                      835                      840

gcc aga gaa tat gga gga tca aag agg aac gcc ttg ctg aag tgg tgt      2595
Ala Arg Glu Tyr Gly Gly Ser Lys Arg Asn Ala Leu Leu Lys Trp Cys
      845                      850                      855

cag aag aaa aca gaa ggc tat cag aat att gac att aca aac ttc agc      2643
Gln Lys Lys Thr Glu Gly Tyr Gln Asn Ile Asp Ile Thr Asn Phe Ser
      860                      865                      870

agc agc tgg aat gat ggg ctg gcc ttc tgt gcc ctc ctg cat aca tat      2691
Ser Ser Trp Asn Asp Gly Leu Ala Phe Cys Ala Leu Leu His Thr Tyr
      875                      880                      885

ctc cct gcc cac att cca tat caa gaa ctg aac agc cag gat aag aga      2739
Leu Pro Ala His Ile Pro Tyr Gln Glu Leu Asn Ser Gln Asp Lys Arg
      890                      895                      900

agg aac ttc atg ctg gct ttc cag gca gct gaa agt gtc ggc atc aaa      2787
Arg Asn Phe Met Leu Ala Phe Gln Ala Ala Glu Ser Val Gly Ile Lys
905                      910                      915                      920

tcc aca ctg gac att aat gaa atg gta cgg act gaa cga ccc gac tgg      2835
Ser Thr Leu Asp Ile Asn Glu Met Val Arg Thr Glu Arg Pro Asp Trp
      925                      930                      935

cag aac gtg atg ctg tat gtg acg gcg atc tac aag tac ttt gag acc      2883
Gln Asn Val Met Leu Tyr Val Thr Ala Ile Tyr Lys Tyr Phe Glu Thr
      940                      945                      950

tgagcatgcc gggaggagcc gccccaatag cgggggtacc cctccacagc gaccgag      2940

```

<210> 937
 <211> 3173
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (232) .. (2532)

```

<400> 937
tgatgtgata tggctgcaag tgcctttgac ccttttgtct cccttcata aactgaaata      60

cctaagctgc tccaacctcc tttttgtctt ttgtttcata aatcctttcc cattgcacat      120

caactcctgt ctctctttgt actgtcactc tcactgtgtg ctttccattc aactgcctt      180

tagccactca tcattttgtg cctacaccac agaaacctct gaatgtaatg g atg ttc      237
                               Met Phe
                               1

cta cca gag gac aag tcg tac aat ggt gga gga ata ggt tct tca aat      285
Leu Pro Glu Asp Lys Ser Tyr Asn Gly Gly Gly Ile Gly Ser Ser Asn
      5                      10                      15

```

agg atc atg gac ttc ttg gag gag cca atc cct ggt gta ggg acc tat	333
Arg Ile Met Asp Phe Leu Glu Glu Pro Ile Pro Gly Val Gly Thr Tyr	
20 25 30	
gat gat ttc aat aca att gat tgg gtg aga gag aag tct cga gac cgg	381
Asp Asp Phe Asn Thr Ile Asp Trp Val Arg Glu Lys Ser Arg Asp Arg	
35 40 45 50	
gat agg cac cga gag att acc aat aaa agc aaa gag tca aca tgg gcc	429
Asp Arg His Arg Glu Ile Thr Asn Lys Ser Lys Glu Ser Thr Trp Ala	
55 60 65	
tta att cac agt gtg agt gat gct ttt tcc ggc tgg ttg ttg atg ctc	477
Leu Ile His Ser Val Ser Asp Ala Phe Ser Gly Trp Leu Leu Met Leu	
70 75 80	
ctt att ggg ctt tta tca ggt tcg tta gct ggt ttg ata gac atc tct	525
Leu Ile Gly Leu Leu Ser Gly Ser Leu Ala Gly Leu Ile Asp Ile Ser	
85 90 95	
gct cat tgg atg aca gac tta aaa gaa ggt ata tgc aca ggg gga ttc	573
Ala His Trp Met Thr Asp Leu Lys Glu Gly Ile Cys Thr Gly Gly Phe	
100 105 110	
tgg ttt aac cat gaa cat tgt tgc tgg aac tct gag cat gtc acc ttt	621
Trp Phe Asn His Glu His Cys Cys Trp Asn Ser Glu His Val Thr Phe	
115 120 125 130	
gaa gag aga gac aaa tgt cca gag tgg aat agt tgg tcc cag ctt atc	669
Glu Glu Arg Asp Lys Cys Pro Glu Trp Asn Ser Trp Ser Gln Leu Ile	
135 140 145	
atc agc aca gat gag gga gcc ttt gcc tac ata gtc aat tat ttc atg	717
Ile Ser Thr Asp Glu Gly Ala Phe Ala Tyr Ile Val Asn Tyr Phe Met	
150 155 160	
tac gtc ctc tgg gct ctc cta ttt gcc ttc ctt gcc gta tct ctt gtc	765
Tyr Val Leu Trp Ala Leu Leu Phe Ala Phe Leu Ala Val Ser Leu Val	
165 170 175	
aag gtg ttt gcg cct tat gcc tgt ggc tct gga atc cct gag ata aaa	813
Lys Val Phe Ala Pro Tyr Ala Cys Gly Ser Gly Ile Pro Glu Ile Lys	
180 185 190	
act atc ttg agt ggt ttc att att agg ggc tat ttg ggt aag tgg act	861
Thr Ile Leu Ser Gly Phe Ile Ile Arg Gly Tyr Leu Gly Lys Trp Thr	
195 200 205 210	
ctg gtt atc aaa acc atc acc ttg gtg ctg gca gtg tcg tct ggc ttg	909
Leu Val Ile Lys Thr Ile Thr Leu Val Leu Ala Val Ser Ser Gly Leu	
215 220 225	
agc ctg ggc aaa gag ggc cct cta gtg cac gtg gct tgc tgc tgt ggg	957
Ser Leu Gly Lys Glu Gly Pro Leu Val His Val Ala Cys Cys Cys Gly	
230 235 240	
aac atc ctg tgc cac tgc ttc aac aaa tac agg aag aat gaa gcc aag	1005
Asn Ile Leu Cys His Cys Phe Asn Lys Tyr Arg Lys Asn Glu Ala Lys	
245 250 255	
cgc aga gag gtc ttg tcg gct gca gca gca gct ggt gta tct gta gcc	1053
Arg Arg Glu Val Leu Ser Ala Ala Ala Ala Gly Val Ser Val Ala	
260 265 270	

ttt gga gca cct ata ggt gga gta tta ttc agc ctt gaa gag gtc agc	1101
Phe Gly Ala Pro Ile Gly Gly Val Leu Phe Ser Leu Glu Glu Val Ser	
275 280 285 290	
tac tat ttt ccc ctc aaa aca ttg tgg cgt tca ttc ttt gct gcc ttg	1149
Tyr Tyr Phe Pro Leu Lys Thr Leu Trp Arg Ser Phe Phe Ala Ala Leu	
295 300 305	
gtg gca gca ttc act cta cgc tcc atc aat cca ttt ggg aac agc cgc	1197
Val Ala Ala Phe Thr Leu Arg Ser Ile Asn Pro Phe Gly Asn Ser Arg	
310 315 320	
ctg gta cta ttt tat gtg gag ttt cac acc cca tgg cat ctc ttt gag	1245
Leu Val Leu Phe Tyr Val Glu Phe His Thr Pro Trp His Leu Phe Glu	
325 330 335	
ctc gtg cca ttc att ctg ctg ggc ata ttt ggt ggt ctg tgg gga gca	1293
Leu Val Pro Phe Ile Leu Leu Gly Ile Phe Gly Gly Leu Trp Gly Ala	
340 345 350	
ctg ttt atc cgc aca aac att gcc tgg tgt cgg aag cga aag acc acc	1341
Leu Phe Ile Arg Thr Asn Ile Ala Trp Cys Arg Lys Arg Lys Thr Thr	
355 360 365 370	
cag ttg ggc aag tat cct gtt ata gag gta ctc gtc gtg aca gcc atc	1389
Gln Leu Gly Lys Tyr Pro Val Ile Glu Val Leu Val Val Thr Ala Ile	
375 380 385	
act gcc atc ctg gct ttc ccc aat gaa tac act cgg atg agc aca agt	1437
Thr Ala Ile Leu Ala Phe Pro Asn Glu Tyr Thr Arg Met Ser Thr Ser	
390 395 400	
gag ctc att tct gag ctg ttt aat gac tgt ggc ctt ctg gac tcc tcc	1485
Glu Leu Ile Ser Glu Leu Phe Asn Asp Cys Gly Leu Leu Asp Ser Ser	
405 410 415	
aag ctc tgt gat tat gag aac cgt ttc aac aca agc aaa ggg ggt gaa	1533
Lys Leu Cys Asp Tyr Glu Asn Arg Phe Asn Thr Ser Lys Gly Gly Glu	
420 425 430	
ctg cct gac aga ccg gct ggc gtg gga gtc tac agt gca atg tgg cag	1581
Leu Pro Asp Arg Pro Ala Gly Val Gly Val Tyr Ser Ala Met Trp Gln	
435 440 445 450	
ctg gct tta aca ctc ata ctg aaa att gtc att act ata ttc acc ttt	1629
Leu Ala Leu Thr Leu Ile Leu Lys Ile Val Ile Thr Ile Phe Thr Phe	
455 460 465	
ggc atg aag atc cct tct ggc ctc ttt atc cct agc atg gct gtt ggt	1677
Gly Met Lys Ile Pro Ser Gly Leu Phe Ile Pro Ser Met Ala Val Gly	
470 475 480	
gct ata gca ggt cga ctt cta gga gta gga atg gaa cag ctg gct tat	1725
Ala Ile Ala Gly Arg Leu Leu Gly Val Gly Met Glu Gln Leu Ala Tyr	
485 490 495	
tac cac cag gaa tgg acc gtc ttc aat agc tgg tgt agt cag gga gct	1773
Tyr His Gln Glu Trp Thr Val Phe Asn Ser Trp Cys Ser Gln Gly Ala	
500 505 510	
gat tgc atc acc ccc ggc ctt tat gca atg gtt ggg gct gca gcc tgc	1821
Asp Cys Ile Thr Pro Gly Leu Tyr Ala Met Val Gly Ala Ala Ala Cys	
515 520 525 530	

tta ggt ggg gtg act cgg atg act gtt tct ctt gtt gtc ata atg ttt Leu Gly Gly Val Thr Arg Met Thr Val Ser Leu Val Val Ile Met Phe 535 540 545	1869
gaa ctg act ggt ggc tta gaa tac atc gtg cct ctg atg gct gca gcc Glu Leu Thr Gly Gly Leu Glu Tyr Ile Val Pro Leu Met Ala Ala Ala 550 555 560	1917
atg aca agc aag tgg gtg gca gat gct ctt ggg cgg gag ggc atc tat Met Thr Ser Lys Trp Val Ala Asp Ala Leu Gly Arg Glu Gly Ile Tyr 565 570 575	1965
gat gcc cac atc cgt ctc aat gga tac ccc ttt ctt gaa gcc aaa gaa Asp Ala His Ile Arg Leu Asn Gly Tyr Pro Phe Leu Glu Ala Lys Glu 580 585 590	2013
gag ttt gct cat aag acc ctg gca atg gat gtg atg aaa ccc cgg aga Glu Phe Ala His Lys Thr Leu Ala Met Asp Val Met Lys Pro Arg Arg 595 600 605 610	2061
aat gat cct ttg ttg act gtc ctt act cag gac agt atg act gtg gaa Asn Asp Pro Leu Leu Thr Val Leu Thr Gln Asp Ser Met Thr Val Glu 615 620 625	2109
gat gta gag acc ata atc agt gaa acc act tac agt ggc ttc cca gtg Asp Val Glu Thr Ile Ile Ser Glu Thr Thr Tyr Ser Gly Phe Pro Val 630 635 640	2157
gtg gta tcc cgg gag tcc caa aga ctt gtg ggc ttt gtc ctc cga aga Val Val Ser Arg Glu Ser Gln Arg Leu Val Gly Phe Val Leu Arg Arg 645 650 655	2205
gat ctc att att tca att gaa aat gct cga aag aaa cag gat ggg gtt Asp Leu Ile Ile Ser Ile Glu Asn Ala Arg Lys Lys Gln Asp Gly Val 660 665 670	2253
gtt agc act tcc atc att tat ttc acg gag cat tct cct cca ttg cca Val Ser Thr Ser Ile Ile Tyr Phe Thr Glu His Ser Pro Pro Leu Pro 675 680 685 690	2301
cca tac act cca ccc act cta aag ctt cgg aac atc ctc gat ctc agc Pro Tyr Thr Pro Pro Thr Leu Lys Leu Arg Asn Ile Leu Asp Leu Ser 695 700 705	2349
ccc ttc act gtg act gac ctt aca ccc atg gag atc gta gtg gat att Pro Phe Thr Val Thr Asp Leu Thr Pro Met Glu Ile Val Val Asp Ile 710 715 720	2397
ttc cga aag ctg gga ctg cgg cag tgc ctg gtt aca cac aac ggg cga Phe Arg Lys Leu Gly Leu Arg Gln Cys Leu Val Thr His Asn Gly Arg 725 730 735	2445
ttg ctt gga atc att acc aaa aag gat gtg tta aag cat ata gca cag Leu Leu Gly Ile Ile Thr Lys Lys Asp Val Leu Lys His Ile Ala Gln 740 745 750	2493
atg gcg aac caa gat cct gat tcc att ctc ttc aac tag aatcatagag Met Ala Asn Gln Asp Pro Asp Ser Ile Leu Phe Asn * 755 760 765	2542
ttctggatgt aaagcgggaa ggacattaca gaccatggat atgttggttta acggtaccca	2602
aaacacattt tccatatttg gatggtgaag tcacattagt gtgttggtctc ttctctacaa	2662

gttaaccagt tgcaactacat aatctctgga aattaatctt ctcttttagga gaaattatag 2722
 ttaggcttcc atgatgttac attaggaaga tatcatgaaa gaataaataa gattgctatg 2782
 gtttaattat atttgctttt taaaagattt ttttaactta aaaagtagtt agccaatatg 2842
 caatcactga aaactatgca agagaaattc caaccgtcct gacctataac ctgtaggaaa 2902
 ccgacgaaaa agtcactott ttgggatcta actgttggtta ctggaagacg aaggtaaact 2962
 aaggggcttt gcttttcaaa ccagagaaag gaaagccaga aggaaaagag taatggtatt 3022
 ttctagactg tgaagattca gttcaaagt taccctgtt cctgttaca tatttagcat 3082
 tattagtttg ttatgtgtgt atgtttatgt taattttaat ttctgattat aagacaatgc 3142
 tgctttgggt aatctcttct aaaggaattt a 3173

<210> 938
 <211> 1357
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (88)..(1119)

<220>
 <221> misc_feature
 <222> (1)...(1357)
 <223> n = a,t,c or g

<400> 938
 gagaaaggag agggaggagg aggcgcgccg cgccatggtg tctgcgcgg ggccagggcc 60
 agggccgggg ccgggccagg ccgggcc atg agc cgc gcc ggg agc tgg gac 111
 Met Ser Arg Ala Gly Ser Trp Asp
 1 5
 atg gac ggg ctg cgg gca gac ggc ggg ggc gcc ggt ggc gcc ccg gcc 159
 Met Asp Gly Leu Arg Ala Asp Gly Gly Gly Ala Gly Gly Ala Pro Ala
 10 15 20
 tct tcc tcc tcc tca tcc gtc ggc ggc ggc ggc ggc tca ggc cag tgc 207
 Ser Ser Ser Ser Ser Val Ala Ala Ala Ala Ser Gly Gln Cys
 25 30 35 40
 cgc ggc ttt ctc tcc ggc cct gtg ttc gcc ggg acg cat tcc ggg cgg 255
 Arg Gly Phe Leu Ser Ala Pro Val Phe Ala Gly Thr His Ser Gly Arg
 45 50 55
 gcg gcg gcg gcg gca gcg gcg gct gcg gcg gcg gcg gcg gca gcc tcc 303
 Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ser
 60 65 70
 ggc ttt gcg tac ccc ggg acc tct gag cgc acg ggc tct tcc tcc tcc 351
 Gly Phe Ala Tyr Pro Gly Thr Ser Glu Arg Thr Gly Ser Ser Ser Ser
 75 80 85
 tcc tcc tct tct gcc gtt gta gcg gcg cgc ccg gag gct ccc cca gcc 399

Ser	Ser	Ser	Ser	Ala	Val	Val	Ala	Ala	Arg	Pro	Glu	Ala	Pro	Pro	Ala	
90						95					100					
aaa	gag	tgc	cca	gca	ccc	acg	cct	gca	gcg	gcc	gct	gca	gcg	ccc	ccg	447
Lys	Glu	Cys	Pro	Ala	Pro	Thr	Pro	Ala	Ala	Ala	Ala	Ala	Ala	Pro	Pro	
105					110				115					120		
agc	gct	cca	gcg	ctg	ggc	tac	ggc	tac	cac	ttc	ggc	aac	ggc	tac	tac	495
Ser	Ala	Pro	Ala	Leu	Gly	Tyr	Gly	Tyr	His	Phe	Gly	Asn	Gly	Tyr	Tyr	
				125				130					135			
agc	tgc	cgt	atg	tcg	cac	ggc	gtg	ggc	tta	cag	cag	aac	gcg	ctc	aag	543
Ser	Cys	Arg	Met	Ser	His	Gly	Val	Gly	Leu	Gln	Gln	Asn	Ala	Leu	Lys	
			140				145					150				
tca	tcg	ccg	cac	gcc	tcg	ctg	gga	ggc	ttt	ccc	gtg	gag	aag	tac	atg	591
Ser	Ser	Pro	His	Ala	Ser	Leu	Gly	Gly	Phe	Pro	Val	Glu	Lys	Tyr	Met	
		155				160						165				
gac	gtg	tca	ggc	ctg	gcg	agc	agc	agc	gta	ccg	gcc	aac	gag	gtg	cca	639
Asp	Val	Ser	Gly	Leu	Ala	Ser	Ser	Ser	Val	Pro	Ala	Asn	Glu	Val	Pro	
	170					175				180						
gcg	cga	gcc	aag	gag	gta	tcc	ttc	tac	cag	ggc	tat	acg	agc	cct	tac	687
Ala	Arg	Ala	Lys	Glu	Val	Ser	Phe	Tyr	Gln	Gly	Tyr	Thr	Ser	Pro	Tyr	
185					190				195					200		
cag	cac	gtg	ccc	ggc	tat	atc	gac	atg	gtg	tcc	act	ttc	ggc	tcc	ggg	735
Gln	His	Val	Pro	Gly	Tyr	Ile	Asp	Met	Val	Ser	Thr	Phe	Gly	Ser	Gly	
			205					210					215			
gag	cct	cgg	cac	gag	gcc	tac	atc	tcc	atg	gag	ggg	tac	cag	tcc	tgg	783
Glu	Pro	Arg	His	Glu	Ala	Tyr	Ile	Ser	Met	Glu	Gly	Tyr	Gln	Ser	Trp	
			220					225				230				
acg	ctg	gct	aac	ggg	tgg	aac	agc	cag	gtg	tac	tgc	acc	aag	gac	cag	831
Thr	Leu	Ala	Asn	Gly	Trp	Asn	Ser	Gln	Val	Tyr	Cys	Thr	Lys	Asp	Gln	
		235				240						245				
cca	cag	ggg	tcc	cac	ttt	tgg	aaa	tct	tcc	ttt	cca	ggg	gat	gtg	gct	879
Pro	Gln	Gly	Ser	His	Phe	Trp	Lys	Ser	Ser	Phe	Pro	Gly	Asp	Val	Ala	
		250				255					260					
cta	aac	cag	ccg	gac	atg	tgc	gtc	tac	cga	aga	ggg	agg	aag	aag	aga	927
Leu	Asn	Gln	Pro	Asp	Met	Cys	Val	Tyr	Arg	Arg	Gly	Arg	Lys	Lys	Arg	
265					270				275					280		
gtg	cct	tac	acc	aaa	ctg	cag	ctt	aaa	gaa	ctg	gag	aac	gag	tat	gcc	975
Val	Pro	Tyr	Thr	Lys	Leu	Gln	Leu	Lys	Glu	Leu	Glu	Asn	Glu	Tyr	Ala	
				285				290					295			
att	aac	aaa	ttc	att	aac	aag	gac	aag	cgg	cgg	cgt	atc	tcg	gct	gct	1023
Ile	Asn	Lys	Phe	Ile	Asn	Lys	Asp	Lys	Arg	Arg	Arg	Ile	Ser	Ala	Ala	
		300						305				310				
acg	aac	cta	tct	gag	aga	caa	gtg	acc	att	tgg	ttt	cag	aac	cga	aga	1071
Thr	Asn	Leu	Ser	Glu	Arg	Gln	Val	Thr	Ile	Trp	Phe	Gln	Asn	Arg	Arg	
		315				320					325					
gtg	aag	gac	aag	aaa	att	gtc	tcc	aag	ctc	aaa	gat	act	gtc	tcc	tga	1119
Val	Lys	Asp	Lys	Lys	Ile	Val	Ser	Lys	Leu	Lys	Asp	Thr	Val	Ser	*	
	330					335					340					
tgtggtccag	gttggtccaca	gacagcttac	aagccattcg	gttgtctcca	aaaggccttt											1179

ggaaagactt gaaatgtatt taattccccc caccctctgc caatggtggc aaattttgtg 1239
aattgttttt ctctcttccc cttatctggc tctaaaacct tctgctgccc aacctgactt 1299
tgtagttctg aattttactt gggtattant ggnttnntgt cttgcctaag gtttttaa 1357

<210> 939
<211> 4055
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (29)..(2884)

<220>
<221> misc_feature
<222> (1)...(4055)
<223> n = a,t,c or g

<400> 939
gggccgcggg ggagggggcg accacaag atg gcg gac ctc tcg ctg ctt cag 52
Met Ala Asp Leu Ser Leu Leu Gln
1 5

gag gac ctg cag gag gac gca gac gga ttt ggt gtg gat gac tac agc 100
Glu Asp Leu Gln Glu Asp Ala Asp Gly Phe Gly Val Asp Asp Tyr Ser
10 15 20

tca gag tct gat gtg att att ata cct tca gcc ctg gac ttt gtc tca 148
Ser Glu Ser Asp Val Ile Ile Pro Ser Ala Leu Asp Phe Val Ser
25 30 35 40

caa gat gaa atg ttg acg ccc ctg ggg aga ttg gac aag tat gct gca 196
Gln Asp Glu Met Leu Thr Pro Leu Gly Arg Leu Asp Lys Tyr Ala Ala
45 50 55

agt gag aac ata ttt aac cag aca aaa tgg tgg ccc cgg agt ttg ctc 244
Ser Glu Asn Ile Phe Asn Gln Thr Lys Trp Trp Pro Arg Ser Leu Leu
60 65 70

gat acc ttg agg gaa gtc tgc gat gat gaa aga gat tgt att gct gtt 292
Asp Thr Leu Arg Glu Val Cys Asp Asp Glu Arg Asp Cys Ile Ala Val
75 80 85

ttg gaa aga att agc aga ttg gcc gat gat tca gaa cca act gtg aga 340
Leu Glu Arg Ile Ser Arg Leu Ala Asp Asp Ser Glu Pro Thr Val Arg
90 95 100

gcg gag ctg atg gaa cag gtg cct cac atc gca ctg ttt tgt caa gaa 388
Ala Glu Leu Met Glu Gln Val Pro His Ile Ala Leu Phe Cys Gln Glu
105 110 115 120

aac cgg cct tca ata cca tat gct ttt tca aaa ttc tta cta cct att 436
Asn Arg Pro Ser Ile Pro Tyr Ala Phe Ser Lys Phe Leu Leu Pro Ile
125 130 135

gtg gtt aga tac ctt gca gat cag aat aat cag gtg agg aaa aca agt 484
Val Val Arg Tyr Leu Ala Asp Gln Asn Asn Gln Val Arg Lys Thr Ser
140 145 150

cag gca gct ttg ctg gct ctg ttg gag cag gag ctc att gaa cga ttt Gln Ala Ala Leu Leu Ala Leu Leu Glu Gln Glu Leu Ile Glu Arg Phe 155 160 165	532
gat gtg gag acc aaa gtg tgc cct gtc ctc ata gag ctg aca gcc cca Asp Val Glu Thr Lys Val Cys Pro Val Leu Ile Glu Leu Thr Ala Pro 170 175 180	580
gat agc aat gat gat gtg aaa aca gaa gct gtg gct ata atg tgc aaa Asp Ser Asn Asp Asp Val Lys Thr Glu Ala Val Ala Ile Met Cys Lys 185 190 195 200	628
atg gct ccc atg gtt ggg aag gat att aca gag cgt ctt atc ctc cct Met Ala Pro Met Val Gly Lys Asp Ile Thr Glu Arg Leu Ile Leu Pro 205 210 215	676
agg ttt tgt gag atg tgc tgc gat tgc aga atg ttt cac gtt cga aag Arg Phe Cys Glu Met Cys Cys Asp Cys Arg Met Phe His Val Arg Lys 220 225 230	724
gtc tgt gct gcc aat ttt gga gat att tgc agt gta gtt ggc cag caa Val Cys Ala Ala Asn Phe Gly Asp Ile Cys Ser Val Val Gly Gln Gln 235 240 245	772
gct act gaa gaa atg ttg ctg ccc aga ttt ttc cag ctt tgt tct gat Ala Thr Glu Glu Met Leu Leu Pro Arg Phe Phe Gln Leu Cys Ser Asp 250 255 260	820
aat gta tgg gga gtc cga aag gct tgt gct gaa tgc ttc atg gcg gtt Asn Val Trp Gly Val Arg Lys Ala Cys Ala Glu Cys Phe Met Ala Val 265 270 275 280	868
tca tgt gca aca tgt caa gaa atc cga cgg acc aaa tta tca gca ctt Ser Cys Ala Thr Cys Gln Glu Ile Arg Arg Thr Lys Leu Ser Ala Leu 285 290 295	916
ttt att aat ttg atc agt gat cct tca cgt tgg gtt cgc caa gca gct Phe Ile Asn Leu Ile Ser Asp Pro Ser Arg Trp Val Arg Gln Ala Ala 300 305 310	964
ttt cag tct ctg gga cct ttc ata tct act ttt gct aat cca tct agc Phe Gln Ser Leu Gly Pro Phe Ile Ser Thr Phe Ala Asn Pro Ser Ser 315 320 325	1012
tca ggc cag tat ttt aaa gaa gaa agc aaa agt tca gaa gag atg tca Ser Gly Gln Tyr Phe Lys Glu Glu Ser Lys Ser Ser Glu Glu Met Ser 330 335 340	1060
gta gaa aac aaa aat agg acc aga gat caa gaa gcc cca gag gat gta Val Glu Asn Lys Asn Arg Thr Arg Asp Gln Glu Ala Pro Glu Asp Val 345 350 355 360	1108
caa gtc agg cca gag gat act cct tca gat ctc agt gtt agt aat tcc Gln Val Arg Pro Glu Asp Thr Pro Ser Asp Leu Ser Val Ser Asn Ser 365 370 375	1156
agt gtc ata ctg gaa aac acg atg gaa gac cat gct gct gag gca tcc Ser Val Ile Leu Glu Asn Thr Met Glu Asp His Ala Ala Glu Ala Ser 380 385 390	1204
ggg aag cct cta ggt gaa att agt gtt cca ctg gac agc tct tta ctt Gly Lys Pro Leu Gly Glu Ile Ser Val Pro Leu Asp Ser Ser Leu Leu 395 400 405	1252

tgt act ttg tcc tca gaa tct cac cag gaa gca gct agt aat gag aat	1300
Cys Thr Leu Ser Ser Glu Ser His Gln Glu Ala Ala Ser Asn Glu Asn	
410 415 420	
gat aaa aaa cct ggt aac tac aaa tct atg tta cga cca gag gtt ggc	1348
Asp Lys Lys Pro Gly Asn Tyr Lys Ser Met Leu Arg Pro Glu Val Gly	
425 430 435 440	
acc act tca caa gat tca gct ctc tta gat cag gaa ttg tat aac tcc	1396
Thr Thr Ser Gln Asp Ser Ala Leu Leu Asp Gln Glu Leu Tyr Asn Ser	
445 450 455	
ttc cat ttc tgg agg act cct ctt cct gaa ata gat cta gac ata gag	1444
Phe His Phe Trp Arg Thr Pro Leu Pro Glu Ile Asp Leu Asp Ile Glu	
460 465 470	
ctt gaa cag aac tct ggg gga aaa ccc agc cca gag gga cca gag gaa	1492
Leu Glu Gln Asn Ser Gly Gly Lys Pro Ser Pro Glu Gly Pro Glu Glu	
475 480 485	
gaa tct gag ggc cct gtg ccc agt tct cca aac atc acc atg gcc acc	1540
Glu Ser Glu Gly Pro Val Pro Ser Ser Pro Asn Ile Thr Met Ala Thr	
490 495 500	
aga aag gaa ctg gaa gaa atg ata gaa aat cta gag ccc cac att gat	1588
Arg Lys Glu Leu Glu Glu Met Ile Glu Asn Leu Glu Pro His Ile Asp	
505 510 515 520	
gat cca gat gtt aaa gca caa gtg gaa gtg ctg tcc gct gca cta cgt	1636
Asp Pro Asp Val Lys Ala Gln Val Glu Val Leu Ser Ala Ala Leu Arg	
525 530 535	
gct tcc agc ctg gat gca cat gaa gag acc atc agt ata gaa aag aga	1684
Ala Ser Ser Leu Asp Ala His Glu Glu Thr Ile Ser Ile Glu Lys Arg	
540 545 550	
agt gat ttg caa gat gaa ctg gat ata aat gag cta cca aat tgt aaa	1732
Ser Asp Leu Gln Asp Glu Leu Asp Ile Asn Glu Leu Pro Asn Cys Lys	
555 560 565	
ata aat caa gaa gat tct gtg cct tta atc agc gat gct gtt gag aat	1780
Ile Asn Gln Glu Asp Ser Val Pro Leu Ile Ser Asp Ala Val Glu Asn	
570 575 580	
atg gac tcc act ctt cac tat att cac agc gat tca gac ttg agc aac	1828
Met Asp Ser Thr Leu His Tyr Ile His Ser Asp Ser Asp Leu Ser Asn	
585 590 595 600	
aat agc agt ttt agc cct gat gag gaa agg aga act aaa gta caa gat	1876
Asn Ser Ser Phe Ser Pro Asp Glu Glu Arg Arg Thr Lys Val Gln Asp	
605 610 615	
gtt gta cct cag gcg ttg tta gat cag tat tta tct atg act gac cct	1924
Val Val Pro Gln Ala Leu Leu Asp Gln Tyr Leu Ser Met Thr Asp Pro	
620 625 630	
tct cgt gca cag acg gtt gac act gaa att gct aag cac tgt gca tat	1972
Ser Arg Ala Gln Thr Val Asp Thr Glu Ile Ala Lys His Cys Ala Tyr	
635 640 645	
agc ctc cct ggt gtg gcc ttg aca ctc gga aga cag aat tgg cac tgc	2020
Ser Leu Pro Gly Val Ala Leu Thr Leu Gly Arg Gln Asn Trp His Cys	
650 655 660	

ctg aga gag acg tat gag act ctg gcc tca gac atg cag tgg aaa gtt Leu Arg Glu Thr Tyr Glu Thr Leu Ala Ser Asp Met Gln Trp Lys Val 665. 670 675 680	2068
cga cga act cta gca ttc tcc atc cac gag ctt gca gtt att ctt gga Arg Arg Thr Leu Ala Phe Ser Ile His Glu Leu Ala Val Ile Leu Gly 685 690 695	2116
gat caa ttg aca gct gca gat ctg gtt cca att ttt aat gga ttt tta Asp Gln Leu Thr Ala Ala Asp Leu Val Pro Ile Phe Asn Gly Phe Leu 700 705 710	2164
aaa gac ctc gat gaa gtc agg ata ggt gtt ctt aaa cac ttg cat gat Lys Asp Leu Asp Glu Val Arg Ile Gly Val Leu Lys His Leu His Asp 715 720 725	2212
ttt ctg aag ctt ctt cat att gac aaa aga aga gaa tat ctt tat caa Phe Leu Lys Leu Leu His Ile Asp Lys Arg Arg Glu Tyr Leu Tyr Gln 730 735 740	2260
ctt cag gag ttt ttg gtg aca gat aat agt aga aat tgg cgg ttt cga Leu Gln Glu Phe Leu Val Thr Asp Asn Ser Arg Asn Trp Arg Phe Arg 745 750 755 760	2308
gct gaa ctg gct gaa cag ctg att tta ctt cta gag tta tat agt ccc Ala Glu Leu Ala Glu Gln Leu Ile Leu Leu Leu Glu Leu Tyr Ser Pro 765 770 775	2356
aga gat gtt tat gac tat tta cgt ccc att gct ctg aat ctg tgt gca Arg Asp Val Tyr Asp Tyr Leu Arg Pro Ile Ala Leu Asn Leu Cys Ala 780 785 790	2404
gac aaa gtt tct tct gtt cgt tgg att tcc tac aag ttg gtc agc gag Asp Lys Val Ser Ser Val Arg Trp Ile Ser Tyr Lys Leu Val Ser Glu 795 800 805	2452
atg gtg aag aag ctg cac gcg gca aca cca cca acg ttc gga gtg gac Met Val Lys Lys Leu His Ala Ala Thr Pro Pro Thr Phe Gly Val Asp 810 815 820	2500
ctc atc aat gag ctt gtg gag aac ttt ggc aga tgt ccc aag tgg tct Leu Ile Asn Glu Leu Val Glu Asn Phe Gly Arg Cys Pro Lys Trp Ser 825 830 835 840	2548
ggt cgg caa gcc ttt gtc ttt gtc tgc cag act gtc att gag gat gac Gly Arg Gln Ala Phe Val Phe Val Cys Gln Thr Val Ile Glu Asp Asp 845 850 855	2596
tgc ctt ccc atg gac cag ttt gct gtg cat ctc atg ccg cat ctg cta Cys Leu Pro Met Asp Gln Phe Ala Val His Leu Met Pro His Leu Leu 860 865 870	2644
acc tta gca aat gac agg gtt cct aac gtg cga gtg ctg ctt gca aag Thr Leu Ala Asn Asp Arg Val Pro Asn Val Arg Val Leu Leu Ala Lys 875 880 885	2692
aca tta aga caa act cta cta gaa aaa gac tat ttc ttg gcc tct gcc Thr Leu Arg Gln Thr Leu Leu Glu Lys Asp Tyr Phe Leu Ala Ser Ala 890 895 900	2740
agc tgc cac cag gag gct gtg gag cag acc atc atg gct ctt cag atg Ser Cys His Gln Glu Ala Val Glu Gln Thr Ile Met Ala Leu Gln Met 905 910 915 920	2788

```

gac cgg gac agc gat gtc aag tat ttt gca agc atc cac cct gcc agt      2836
Asp Arg Asp Ser Asp Val Lys Tyr Phe Ala Ser Ile His Pro Ala Ser
          925                      930                      935

acc aaa atc tcc gaa gat gcc atg agc aca gcg tcc tca acc tac tag      2884
Thr Lys Ile Ser Glu Asp Ala Met Ser Thr Ala Ser Ser Thr Tyr  *
          940                      945                      950

aaggcttgaa tctcgggtgtc tttcctgctt ccatgagagc cgagggttcag tgggcattcg  2944

ccacgcatgt gacctgggat agctttcggg ggaggagaga ccttcctctc ctgcggactt  3004

cattgcaggt gcaagttgcc tacacccaat accagggatt tcaagagtca agagaaagta  3064

cagtaaacac tattatctta tcttgacttt aaggggaaat aatttctcag aggattataa  3124

ttgtcaccga agccttaaat ccttctgtct tcttgactga atgaaacttg aattggcaga  3184

gcatttttct tatggaaggg atgagattcc cagagacctg cattgctttc tcctgggttt  3244

atttaacaat cgacaaatga aattcttaca gcctgaaggc agacgtgtgc ccagatgtga  3304

aagagacctt cagtatcagc cctaactctt ctctcccagg aaggacttgc tgggctctgt  3364

ggccagctgt ccagcccagc cctgtgtgtg aatcgtttgt gacgtgtgca aatgggaaag  3424

gaggggtttt tacatctcct aaaggacctg atgccaacac aagtaggatt gacttaaact  3484

cttaagcgca gcatattgct gtacacattt acagaatggg tgcgtagtgt ctgtgtctga  3544

ttttttcatg ctgggtcatga cctgaaggaa atttattaga cgtataatgt atgtctggtg  3604

tttttaactt gatcatgac agctctgagg tgcaacttct tcacatactg tacatacctg  3664

tgaccactct tgggagtgtc gcagtcttta atcatgtgtt ttaaactgtt gtggcacaag  3724

ttctcttgtc caaataaaat ttattaataa gatctataga gagagatata tacacttttg  3784

attgttttct agatgtctac caataaatgc aatttgtgac ctgtattaat gatttaaagt  3844

ggggaaacta gattaaaata tttgtctttt aactagttta ttagtttctn tggaatctgc  3904

ctgtgtccct gggtttgggt tttgctcttg gcagcagcag gtgcctcttg ggtgctctc  3964

ctgctcctgc ctgcagccct aagagcaggt gggtgccgag tgtctggcac agcttggatg  4024

ccgcccactg aagacagcag aggggggttg t                                     4055

```

```

<210> 940
<211> 2568
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> CDS
<222> (281)..(2188)

```

```

<400> 940
gggatggggg cggagtcacag ggcgtggggg ggccgggttg ttgtggtcgc cattttgctg      60

```

gttgcatctac tgggtaatcg gggccctggc ttgccgcgtc cgccggatac cctcagccag	120
tgggcagggtc tgagctcggg ctccccgagc agtttgagtc cccttgcccg ctcccttcagg	180
tctcagcggc ggtggcagcc gaggtgcagg atgcaagaag gcgccccccg gccgggctcc	240
cgctccaggc ctgcgtcccc tgcggccctc tgagcccacc atg gcc gtc cca ccg	295
Met Ala Val Pro Pro	1 5
ggc cat ggt ccc ttc tct ggc ttc cca ggg ccc cag gag cac acg cag	343
Gly His Gly Pro Phe Ser Gly Phe Pro Gly Pro Gln Glu His Thr Gln	10 15 20
gta ttg cct gat gtg cgg cta ctg cct cgg agg ctg ccc ctg gcc ttc	391
Val Leu Pro Asp Val Arg Leu Leu Pro Arg Arg Leu Pro Leu Ala Phe	25 30 35
cgg gat gca acc tca gcc ccg ctg cgt aag ctc tct gtg gac ctc atc	439
Arg Asp Ala Thr Ser Ala Pro Leu Arg Lys Leu Ser Val Asp Leu Ile	40 45 50
aag acc tac aag cac atc aat gag gta tac tat gcg aag aag aag cgg	487
Lys Thr Tyr Lys His Ile Asn Glu Val Tyr Tyr Ala Lys Lys Lys Arg	55 60 65
cgg gcc cag cag gcg cca ccc cag gat tcg agc aac aag aag gag aag	535
Arg Ala Gln Gln Ala Pro Pro Gln Asp Ser Ser Asn Lys Lys Glu Lys	70 75 80 85
aag gtc ctg aac cat ggt tat gat gac gac aac cat gac tac atc gtg	583
Lys Val Leu Asn His Gly Tyr Asp Asp Asp Asn His Asp Tyr Ile Val	90 95 100
cgc agt ggc gag cgc tgg ctg gag cgc tac gaa att gac tcg ctc att	631
Arg Ser Gly Glu Arg Trp Leu Glu Arg Tyr Glu Ile Asp Ser Leu Ile	105 110 115
ggc aaa ggc tcc ttt ggc cag gtg gtg aaa gcc tat gat cat cag acc	679
Gly Lys Gly Ser Phe Gly Gln Val Val Lys Ala Tyr Asp His Gln Thr	120 125 130
cag gag ctt gtg gcc atc aag atc atc aag aac aaa aag gct ttc ctg	727
Gln Glu Leu Val Ala Ile Lys Ile Ile Lys Asn Lys Lys Ala Phe Leu	135 140 145
aac cag gcc cag att gag ctg cgg ctg ctg gag ctg atg aac cag cat	775
Asn Gln Ala Gln Ile Glu Leu Arg Leu Leu Glu Leu Met Asn Gln His	150 155 160 165
gac acg gag atg aag tac tat ata gta cac ctg aag cgg cac ttc atg	823
Asp Thr Glu Met Lys Tyr Tyr Ile Val His Leu Lys Arg His Phe Met	170 175 180
ttc cgg aac cac ctg tgc ctg gta ttt gag ctg ctg tcc tac aac ctg	871
Phe Arg Asn His Leu Cys Leu Val Phe Glu Leu Leu Ser Tyr Asn Leu	185 190 195
tac gac ctc ctg cgc aac acc cac ttc cgc ggc gtc tcg ctg aac ctg	919
Tyr Asp Leu Leu Arg Asn Thr His Phe Arg Gly Val Ser Leu Asn Leu	200 205 210
acc cgg aag ctg gcg cag cag ctc tgc acg gca ctg ctc ttt ctg gcc	967
Thr Arg Lys Leu Ala Gln Gln Leu Cys Thr Ala Leu Leu Phe Leu Ala	

215	220	225	
acg cct gag ctc agc atc att cac tgc gac ctc aag ccc gaa aac atc			1015
Thr Pro Glu Leu Ser Ile Ile His Cys Asp Leu Lys Pro Glu Asn Ile			
230	235	240	245
ttg ctg tgc aac ccc aag cgc agc gcc atc aag att gtg gac ttc ggc			1063
Leu Leu Cys Asn Pro Lys Arg Ser Ala Ile Lys Ile Val Asp Phe Gly			
250	255		260
agc tcc tgc cag ctt ggc cag agg atc tac cag tat atc cag agc cgc			1111
Ser Ser Cys Gln Leu Gly Gln Arg Ile Tyr Gln Tyr Ile Gln Ser Arg			
265	270		275
ttc tac cgc tca cct gag gtg ctc ctg ggc aca ccc tac gac ctg gcc			1159
Phe Tyr Arg Ser Pro Glu Val Leu Leu Gly Thr Pro Tyr Asp Leu Ala			
280	285		290
att gac atg tgg tcc ctg ggc tgc atc ctt gtg gag atg cac acc gga			1207
Ile Asp Met Trp Ser Leu Gly Cys Ile Leu Val Glu Met His Thr Gly			
295	300		305
gag ccc ctc ttc agt ggc tcc aat gag gtg tgc ccc cag gaa ggg gtc			1255
Glu Pro Leu Phe Ser Gly Ser Asn Glu Val Cys Pro Gln Glu Gly Val			
310	315		320
gac cag atg aac cgc att gtg gag gtg ctg ggc atc cca ccg gcc gcc			1303
Asp Gln Met Asn Arg Ile Val Glu Val Leu Gly Ile Pro Pro Ala Ala			
330	335		340
atg ctg gac cag gcg ccc aag gct cgc aag tac ttt gaa cgg ctg cct			1351
Met Leu Asp Gln Ala Pro Lys Ala Arg Lys Tyr Phe Glu Arg Leu Pro			
345	350		355
ggg ggt ggc tgg acc cta cga agg acg aaa gaa ctc agg aag gat tac			1399
Gly Gly Gly Trp Thr Leu Arg Arg Thr Lys Glu Leu Arg Lys Asp Tyr			
360	365		370
cag ggc ccc ggg aca cgg cgg ctg cag gag gtg ctg ggc gtg cag acg			1447
Gln Gly Pro Gly Thr Arg Arg Leu Gln Glu Val Leu Gly Val Gln Thr			
375	380		385
ggc ggg ccc ggg ggc cgg cgg gcg ggg gag ccg ggc cac agc ccc gcc			1495
Gly Gly Pro Gly Gly Arg Arg Ala Gly Glu Pro Gly His Ser Pro Ala			
390	395		400
gac tac ctc cgc ttc cag gac ctg gtg ctg cgc atg ctg gag tat gag			1543
Asp Tyr Leu Arg Phe Gln Asp Leu Val Leu Arg Met Leu Glu Tyr Glu			
410	415		420
ccc gcc gcc cgc atc agc ccc ctg ggg gct ctg cag cac ggc ttc ttc			1591
Pro Ala Ala Arg Ile Ser Pro Leu Gly Ala Leu Gln His Gly Phe Phe			
425	430		435
cgc cgc acg gcc gac gag gcc acc aac acg ggc ccg gca ggc agc agt			1639
Arg Arg Thr Ala Asp Glu Ala Thr Asn Thr Gly Pro Ala Gly Ser Ser			
440	445		450
gcc tcc acc tcg ccc gcg ccc ctc gac acc tgc ccc tct tcc agc acc			1687
Ala Ser Thr Ser Pro Ala Pro Leu Asp Thr Cys Pro Ser Ser Ser Thr			
455	460		465
gcc agc tcc atc tcc agt tct gga ggc tcc agt ggc tcc tcc agt gac			1735
Ala Ser Ser Ile Ser Ser Ser Gly Gly Ser Ser Gly Ser Ser Ser Asp			

470	475	480	485	
aac cgg acc tac	cgc tac agc aac cga tat	tgt ggg ggc cct ggg ccc	1783	
Asn Arg Thr Tyr	Arg Tyr Ser Asn Arg Tyr Cys Gly Gly Pro Gly Pro			
	490	495	500	
cct atc aca gac	tgt gag atg aac agc ccc cag gtc cca ccc tcc cag	1831		
Pro Ile Thr Asp	Cys Glu Met Asn Ser Pro Gln Val Pro Pro Ser Gln			
	505	510	515	
ccg ctg cgg ccc	tgg gca ggg ggt gat gtg ccc cac aag aca cat caa	1879		
Pro Leu Arg Pro	Trp Ala Gly Gly Asp Val Pro His Lys Thr His Gln			
	520	525	530	
gcc cct gcc tct	gcc tcg tca ctg cct ggg acc ggg gcc cag tta ccc	1927		
Ala Pro Ala Ser	Ala Ser Ser Leu Pro Gly Thr Gly Ala Gln Leu Pro			
	535	540	545	
ccc cag ccc cga	tac ctt ggt cgt ccc cca tca cca acc tca cca cca	1975		
Pro Gln Pro Arg	Tyr Leu Gly Arg Pro Pro Ser Pro Thr Ser Pro Pro			
	550	555	560	
ccc ccg gag ctg	atg gat gtg agc ctg gtg ggc ggc cct gct gac tgc	2023		
Pro Pro Glu Leu	Met Asp Val Ser Leu Val Gly Gly Pro Ala Asp Cys			
	570	575	580	
tcc cca cct cac	cca gcg cct gcc ccc cag cac ccg gct gcc tca gcc	2071		
Ser Pro Pro His	Pro Ala Pro Ala Pro Gln His Pro Ala Ala Ser Ala			
	585	590	595	
ctc cgg act cgg	atg act gga ggt cgt cca ccc ctc ccg cct cct gat	2119		
Leu Arg Thr Arg	Met Thr Gly Gly Arg Pro Pro Leu Pro Pro Pro Asp			
	600	605	610	
gac cct gcc act	ctg ggg cct cac ctg ggc ctc cgt ggt gta ccc cag	2167		
Asp Pro Ala Thr	Leu Gly Pro His Leu Gly Leu Arg Gly Val Pro Gln			
	615	620	625	
agc aca gca gcc	agc tcg tga cc ctgccccctc cctggggccc ctccctgaagc	2220		
Ser Thr Ala Ala	Ser Ser *			
	630	635		
cataccctcc	cccatctggg ggccttgggc tccatcctc atctctctcc ttgactggaa	2280		
ttgctgctac	ccagctgggg tgggtgaggg ctgcaactgat tggggcctgg ggcagggggg	2340		
tcaaggagag	ggttttggcc gctccctccc cactaaggac tggacccttg ggcctctctc	2400		
cccccttttt	tctattttatt gtaccaaaga cagtgggtggt ccggtggagg gaagaccccc	2460		
cctcacccca	ggaccctagg agggggtggg ggcaggtagg gggagatggc cttgctctctc	2520		
ctcgtgttac	ccccagtaaa gagctttctc acaaaaaaaaa aaaaaaaaa	2568		

<210> 941
 <211> 665
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS

<222> (196) .. (501)

<400> 941

```

cccgaattcc cgggcaaccc acgcgtccgc tcagcctcag gagccaatct aaccgatgct      60
cacctcttct gtcttcttgc atgcgaccgc gatctgtggt gcgatggctt cgtcctcaca      120
caggttcaag gaggtgccat catctgtggg ttgctgagct caccagcgt cctgcttctg      180
aatgacaaag actgg atg gat ccc tct gaa gcc tgg gct aat gct aca tgt      231
              Met Asp Pro Ser Glu Ala Trp Ala Asn Ala Thr Cys
              1              5              10

cct ggt gtg aca tat gac cag gag agc cac cag gtg ata ttg cgt ctt      279
Pro Gly Val Thr Tyr Asp Gln Glu Ser His Gln Val Ile Leu Arg Leu
              15              20              25

gga gac cac gag ttc atc aag agt ctg aca ccc tta gaa gga act caa      327
Gly Asp His Glu Phe Ile Lys Ser Leu Thr Pro Leu Glu Gly Thr Gln
              30              35              40

gac acc ttt acc aat ttt cag cag gtt tat ctc tgg aaa gat tct gac      375
Asp Thr Phe Thr Asn Phe Gln Gln Val Tyr Leu Trp Lys Asp Ser Asp
              45              50              55              60

atg ggg tct cgg oct gag tct atg gga tgt aga aaa aac aca gtg cca      423
Met Gly Ser Arg Pro Glu Ser Met Gly Cys Arg Lys Asn Thr Val Pro
              65              70              75

agg cca gca tct cca aca gaa gca ggt act gac ccc caa acc ttc tta      471
Arg Pro Ala Ser Pro Thr Glu Ala Gly Thr Asp Pro Gln Thr Phe Leu
              80              85              90

cac act tgg gtg tct gaa tgc aga gac taa a tgggtgcacc aagagtttaa      522
His Thr Trp Val Ser Glu Cys Arg Asp *
              95              100

tcaatgaacg gatgtattga catcactcta ttctgtatcc atggactctc ctttaattct      582

ttaacccaat tatccagctc ataaatatgg gaagctcctc agatggggcca ttgtcacaag      642

aaagtaaggc ataactactg caa      665

```

<210> 942

<211> 3913

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (146) .. (3757)

<400> 942

```

gccgagagga cgagtgggga gggccagagc tgcgcgtgct gctttgcccg agcccagacc      60
cgagcccagag cccgagcccg agcccagacc cgagcccga cgaagcctg ggagcgcgga      120
gcccggttag ggactcctcc tatatt atg gag cag gca ccc aac atg gct gag      172
              Met Glu Gln Ala Pro Asn Met Ala Glu
              1              5

```

ccc	cgg	ggc	ccc	gta	gac	cat	gga	gtc	cag	att	cgc	ttc	atc	aca	gag	220
Pro	Arg	Gly	Pro	Val	Asp	His	Gly	Val	Gln	Ile	Arg	Phe	Ile	Thr	Glu	
10					15				20						25	
cca	gtg	agt	ggg	gca	gag	atg	ggc	act	cta	cgt	cga	ggg	gga	cga	cgc	268
Pro	Val	Ser	Gly	Ala	Glu	Met	Gly	Thr	Leu	Arg	Arg	Gly	Gly	Arg	Arg	
				30					35					40		
cca	gct	aag	gat	gca	aga	gcc	agt	acc	tac	ggg	gtt	gct	gtg	cgt	gtg	316
Pro	Ala	Lys	Asp	Ala	Arg	Ala	Ser	Thr	Tyr	Gly	Val	Ala	Val	Arg	Val	
			45					50					55			
cag	gga	atc	gct	ggg	cag	ccc	ttt	gtg	gtg	ctc	aac	agt	ggg	gag	aaa	364
Gln	Gly	Ile	Ala	Gly	Gln	Pro	Phe	Val	Val	Leu	Asn	Ser	Gly	Glu	Lys	
		60					65					70				
ggc	ggg	gac	tcc	ttt	ggg	gtc	caa	atc	aag	ggg	gcc	aat	gac	caa	ggg	412
Gly	Gly	Asp	Ser	Phe	Gly	Val	Gln	Ile	Lys	Gly	Ala	Asn	Asp	Gln	Gly	
	75					80					85					
gcc	tca	gga	gct	ctg	agc	tca	gat	ttg	gaa	ctc	cct	gag	aac	ccc	tac	460
Ala	Ser	Gly	Ala	Leu	Ser	Ser	Asp	Leu	Glu	Leu	Pro	Glu	Asn	Pro	Tyr	
90					95					100					105	
tct	cag	gtc	aag	gga	ttt	cct	gcc	ccc	tcg	cag	agc	agc	aca	tct	gat	508
Ser	Gln	Val	Lys	Gly	Phe	Pro	Ala	Pro	Ser	Gln	Ser	Ser	Thr	Ser	Asp	
				110					115					120		
gag	gag	cct	ggg	gcc	tac	tgg	aat	gga	aag	cta	ctc	cgt	tcc	cac	tcc	556
Glu	Glu	Pro	Gly	Ala	Tyr	Trp	Asn	Gly	Lys	Leu	Leu	Arg	Ser	His	Ser	
			125					130					135			
cag	gcc	tca	ctg	gca	ggc	cct	ggc	cca	gtg	gat	cct	agt	aac	aga	agc	604
Gln	Ala	Ser	Leu	Ala	Gly	Pro	Gly	Pro	Val	Asp	Pro	Ser	Asn	Arg	Ser	
		140					145					150				
aac	agc	atg	ctg	gag	cta	gcc	ccg	aaa	gtg	gct	tcc	cca	ggg	agc	acc	652
Asn	Ser	Met	Leu	Glu	Leu	Ala	Pro	Lys	Val	Ala	Ser	Pro	Gly	Ser	Thr	
	155					160					165					
att	gac	act	gct	ccc	ctg	tct	tca	gtg	gac	tca	ctc	atc	aac	aag	ttt	700
Ile	Asp	Thr	Ala	Pro	Leu	Ser	Ser	Val	Asp	Ser	Leu	Ile	Asn	Lys	Phe	
170					175					180					185	
gac	agt	caa	ctt	gga	ggc	cag	gcc	cgg	ggg	cgg	act	ggc	cgc	cga	aca	748
Asp	Ser	Gln	Leu	Gly	Gly	Gln	Ala	Arg	Gly	Arg	Thr	Gly	Arg	Arg	Thr	
			190						195					200		
cgg	atg	cta	ccc	cct	gaa	cag	cgc	aaa	cgg	agc	aag	agc	ctg	gac	agc	796
Arg	Met	Leu	Pro	Pro	Glu	Gln	Arg	Lys	Arg	Ser	Lys	Ser	Leu	Asp	Ser	
			205					210					215			
cgc	ctc	cca	cgg	gac	acc	ttt	gag	gaa	cgg	gag	cgc	cag	tcc	acc	aac	844
Arg	Leu	Pro	Arg	Asp	Thr	Phe	Glu	Glu	Arg	Glu	Arg	Gln	Ser	Thr	Asn	
		220					225					230				
cac	tgg	acc	tct	agc	aca	aaa	tat	gac	aac	cat	gtg	ggc	act	tcg	aag	892
His	Trp	Thr	Ser	Ser	Thr	Lys	Tyr	Asp	Asn	His	Val	Gly	Thr	Ser	Lys	
	235					240					245					
cag	cca	gcc	cag	agc	cag	aac	ctg	agt	cct	ctc	agt	ggc	ttt	agc	cgt	940
Gln	Pro	Ala	Gln	Ser	Gln	Asn	Leu	Ser	Pro	Leu	Ser	Gly	Phe	Ser	Arg	
250					255					260					265	

tct cgt cag act cag gac tgg gtc ctt cag agt ttt gag gag ccg cgg	988
Ser Arg Gln Thr Gln Asp Trp Val Leu Gln Ser Phe Glu Glu Pro Arg	
270 275 280	
agg agt gca cag gac ccc acc atg ctg cag ttc aaa tca act cca gac	1036
Arg Ser Ala Gln Asp Pro Thr Met Leu Gln Phe Lys Ser Thr Pro Asp	
285 290 295	
ctc ctt cga gac cag cag gag gca gcc cca cca gcc agt gtg gac cat	1084
Leu Leu Arg Asp Gln Gln Glu Ala Ala Pro Pro Gly Ser Val Asp His	
300 305 310	
atg aag gcc acc atc tat ggc atc ctg agg gag gga agc tca gaa agt	1132
Met Lys Ala Thr Ile Tyr Gln Ile Leu Arg Glu Gly Ser Ser Glu Ser	
315 320 325	
gaa acc tct gtg agg agg aag gtt agt ttg gtg ctg gag aag atg cag	1180
Glu Thr Ser Val Arg Arg Lys Val Ser Leu Val Leu Glu Lys Met Gln	
330 335 340 345	
cct cta gtg atg gtt tct tct ggt tct act aag gcc gtg gca ggg cag	1228
Pro Leu Val Met Val Ser Ser Gly Ser Thr Lys Ala Val Ala Gly Gln	
350 355 360	
ggt gag ctt acc cga aaa gtg gag gag cta cag cga aag ctg gat gaa	1276
Gly Glu Leu Thr Arg Lys Val Glu Glu Leu Gln Arg Lys Leu Asp Glu	
365 370 375	
gag gtg aag aag cgg cag aag cta gag cca tcc caa gtt ggg ctg gag	1324
Glu Val Lys Lys Arg Gln Lys Leu Glu Pro Ser Gln Val Gly Leu Glu	
380 385 390	
cgg cag ctg gag gag aaa aca gaa gag tgc agc cga ctg cag gag ctg	1372
Arg Gln Leu Glu Glu Lys Thr Glu Glu Cys Ser Arg Leu Gln Glu Leu	
395 400 405	
ctg gag agg agg aag ggg gag gcc cag cag agc aac aag gag ctc cag	1420
Leu Glu Arg Arg Lys Gly Glu Ala Gln Gln Ser Asn Lys Glu Leu Gln	
410 415 420 425	
aac atg aag cgc ctc ttg gac cag ggt gaa gat tta cga cat ggg ctg	1468
Asn Met Lys Arg Leu Leu Asp Gln Gly Glu Asp Leu Arg His Gly Leu	
430 435 440	
gag acc cag gtg atg gag ctg cag aac aag ctg aaa cat gtc cag ggt	1516
Glu Thr Gln Val Met Glu Leu Gln Asn Lys Leu Lys His Val Gln Gly	
445 450 455	
cct gag cct gct aag gag gtg tta ctg aag gac ctg tta gag acc cgg	1564
Pro Glu Pro Ala Lys Glu Val Leu Leu Lys Asp Leu Leu Glu Thr Arg	
460 465 470	
gaa ctt ctg gaa gag gtc ttg gag ggg aaa cag cga gta gag gag cag	1612
Glu Leu Leu Glu Glu Val Leu Glu Gly Lys Gln Arg Val Glu Glu Gln	
475 480 485	
ctg agg ctg cgg gag cgg gag ttg aca gcc ctg aag ggg gcc ctg aaa	1660
Leu Arg Leu Arg Glu Arg Glu Leu Thr Ala Leu Lys Gly Ala Leu Lys	
490 495 500 505	
gag gag gta gcc tcc cgt gac cag gag gtg gaa cat gtc cgg cag cag	1708
Glu Glu Val Ala Ser Arg Asp Gln Glu Val Glu His Val Arg Gln Gln	
510 515 520	

tac	cag	cga	gac	aca	gag	cag	ctc	cgc	agg	agc	atg	caa	gat	gca	acc	1756
Tyr	Gln	Arg	Asp	Thr	Glu	Gln	Leu	Arg	Arg	Ser	Met	Gln	Asp	Ala	Thr	
			525					530					535			
cag	gac	cat	gca	gtg	ctg	gag	gcg	gag	agg	cag	aag	atg	tca	gcc	ctt	1804
Gln	Asp	His	Ala	Val	Leu	Glu	Ala	Glu	Arg	Gln	Lys	Met	Ser	Ala	Leu	
		540					545					550				
gtg	cga	ggg	ctg	cag	agg	gag	ctg	gag	gag	act	tca	gag	gag	aca	ggg	1852
Val	Arg	Gly	Leu	Gln	Arg	Glu	Leu	Glu	Glu	Thr	Ser	Glu	Glu	Thr	Gly	
	555					560					565					
cgt	tgg	cag	agt	atg	ttc	cag	aag	aac	aag	gag	gat	ctt	aga	gcc	acc	1900
Arg	Trp	Gln	Ser	Met	Phe	Gln	Lys	Asn	Lys	Glu	Asp	Leu	Arg	Ala	Thr	
570					575					580					585	
aag	cag	gaa	ctc	ctg	cag	ctg	cga	atg	gag	aag	gag	gag	atg	gaa	gag	1948
Lys	Gln	Glu	Leu	Leu	Gln	Leu	Arg	Met	Glu	Lys	Glu	Glu	Met	Glu	Glu	
			590						595					600		
gag	ctt	gga	gag	aag	ata	gag	gtc	ttg	cag	agg	gaa	tta	gag	cag	gcc	1996
Glu	Leu	Gly	Glu	Lys	Ile	Glu	Val	Leu	Gln	Arg	Glu	Leu	Glu	Gln	Ala	
		605					610						615			
cga	gct	agt	gct	gga	gat	act	cgc	cag	gtt	gag	gtg	ctc	aag	aag	gag	2044
Arg	Ala	Ser	Ala	Gly	Asp	Thr	Arg	Gln	Val	Glu	Val	Leu	Lys	Lys	Glu	
		620					625					630				
ctg	ctc	cgg	aca	cag	gag	gag	ctt	aag	gaa	ctg	cag	gca	gaa	cgg	cag	2092
Leu	Leu	Arg	Thr	Gln	Glu	Glu	Leu	Lys	Glu	Leu	Gln	Ala	Glu	Arg	Gln	
	635					640					645					
agc	cag	gag	gtg	gct	ggg	cga	cac	cgg	gac	cgg	gag	ttg	gag	aag	cag	2140
Ser	Gln	Glu	Val	Ala	Gly	Arg	His	Arg	Asp	Arg	Glu	Leu	Glu	Lys	Gln	
650					655					660					665	
ctg	gcg	gtc	ctg	agg	gtc	gag	gct	gat	cga	ggg	cgg	gag	ctg	gaa	gaa	2188
Leu	Ala	Val	Leu	Arg	Val	Glu	Ala	Asp	Arg	Gly	Arg	Glu	Leu	Glu	Glu	
			670					675						680		
cag	aac	ctc	cag	cta	caa	aag	acc	ctc	cag	caa	ctg	cga	cag	gac	tgt	2236
Gln	Asn	Leu	Gln	Leu	Gln	Lys	Thr	Leu	Gln	Gln	Leu	Arg	Gln	Asp	Cys	
		685						690						695		
gaa	gag	gct	tcc	aag	gct	aag	atg	gtg	gcc	gag	gca	gag	gca	aca	gtg	2284
Glu	Glu	Ala	Ser	Lys	Ala	Lys	Met	Val	Ala	Glu	Ala	Glu	Ala	Thr	Val	
		700					705					710				
ctg	ggg	cag	cgg	cgg	gcc	gca	gtg	gag	acg	acg	ctt	cgg	gag	acc	cag	2332
Leu	Gly	Gln	Arg	Arg	Ala	Ala	Val	Glu	Thr	Thr	Leu	Arg	Glu	Thr	Gln	
	715					720					725					
gag	gaa	aat	gac	gaa	ttc	cgc	cgg	cgc	atc	ctg	ggg	ttg	gag	cag	cag	2380
Glu	Glu	Asn	Asp	Glu	Phe	Arg	Arg	Arg	Ile	Leu	Gly	Leu	Glu	Gln	Gln	
730					735				740						745	
ctg	aag	gag	act	cga	ggg	ctg	gtg	gat	ggg	ggg	gaa	gag	gtg	gag	gca	2428
Leu	Lys	Glu	Thr	Arg	Gly	Leu	Val	Asp	Gly	Gly	Glu	Ala	Val	Glu	Ala	
			750					755						760		
cga	cta	cgg	gac	aag	ctg	cag	cgg	ctg	gag	gca	gag	aaa	cag	cag	ctg	2476
Arg	Leu	Arg	Asp	Lys	Leu	Gln	Arg	Leu	Glu	Ala	Glu	Lys	Gln	Gln	Leu	
			765					770						775		

gag gag gcc ctg aat gcg tcc cag gaa gag gag ggg agt ctg gca gca Glu Glu Ala Leu Asn Ala Ser Gln Glu Glu Glu Gly Ser Leu Ala Ala 780 785 790	2524
gcc aag cgg gca ctg gag gca cgc cta gag gag gct cag cgg ggg ctg Ala Lys Arg Ala Leu Glu Ala Arg Leu Glu Glu Ala Gln Arg Gly Leu 795 800 805	2572
gcc cgc ctg ggg cag gag cag cag aca ctg aac cgg gcc ctg gag gag Ala Arg Leu Gly Gln Glu Gln Gln Thr Leu Asn Arg Ala Leu Glu Glu 810 815 820 825	2620
gaa ggg aag cag cgg gag gtg ctc cgg cga ggc aag gct gag ctg gag Glu Gly Lys Gln Arg Glu Val Leu Arg Arg Gly Lys Ala Glu Leu Glu 830 835 840	2668
gag cag aag cgt ttg ctg gac agg act gtg gac cga ctg aac aag gag Glu Gln Lys Arg Leu Leu Asp Arg Thr Val Asp Arg Leu Asn Lys Glu 845 850 855	2716
ttg gag aag atc ggg gag gac tct aag caa gcc ctg cag cag ctc cag Leu Glu Lys Ile Gly Glu Asp Ser Lys Gln Ala Leu Gln Gln Leu Gln 860 865 870	2764
gcc cag ctg gag gat tat aag gaa aag gcc cgg cgg gag gtg gca gat Ala Gln Leu Glu Asp Tyr Lys Glu Lys Ala Arg Arg Glu Val Ala Asp 875 880 885	2812
gcc cag cgc cag gcc aag gat tgg gcc agt gag gct gag aag acc tct Ala Gln Arg Gln Ala Lys Asp Trp Ala Ser Glu Ala Glu Lys Thr Ser 890 895 900 905	2860
gga gga ctg agc cga ctt cag gat gag atc cag agg ctg cgg cag gcc Gly Gly Leu Ser Arg Leu Gln Asp Glu Ile Gln Arg Leu Arg Gln Ala 910 915 920	2908
ctg cag gca tcc cag gct gag cgg gac aca gcc cgg ctg gac aaa gag Leu Gln Ala Ser Gln Ala Glu Arg Asp Thr Ala Arg Leu Asp Lys Glu 925 930 935	2956
cta ctg gcc cag cga ctg cag ggg ctg gag caa gag gca gag aac aag Leu Leu Ala Gln Arg Leu Gln Gly Leu Glu Gln Glu Ala Glu Asn Lys 940 945 950	3004
aag cgt tcc cag gac gac agg gcc cgg cag ctg aag ggt ctc gag gaa Lys Arg Ser Gln Asp Asp Arg Ala Arg Gln Leu Lys Gly Leu Glu Glu 955 960 965	3052
aaa gtc tca cgg ctg gaa aca gag tta gat gag gag aag aac acc gtg Lys Val Ser Arg Leu Glu Thr Glu Leu Asp Glu Glu Lys Asn Thr Val 970 975 980 985	3100
gag ctg cta aca gat cgg gtg aat cgt ggc cgg gac cag gtg gat cag Glu Leu Leu Thr Asp Arg Val Asn Arg Gly Arg Asp Gln Val Asp Gln 990 995 1000	3148
ctg agg aca gag ctc atg cag gaa agg tct gct cgg cag gac ctg gag Leu Arg Thr Glu Leu Met Gln Glu Arg Ser Ala Arg Gln Asp Leu Glu 1005 1010 1015	3196
tgt gac aaa atc tcc ttg gag aga cag aac aag gac ctg aag acc cgg Cys Asp Lys Ile Ser Leu Glu Arg Gln Asn Lys Asp Leu Lys Thr Arg 1020 1025 1030	3244

```

ttg gcc agc tca gaa ggc ttc cag aag cct agt gcc agc ctc tct cag      3292
Leu Ala Ser Ser Glu Gly Phe Gln Lys Pro Ser Ala Ser Leu Ser Gln
    1035                      1040                      1045

ctt gag tcc cag aat cag ttg ttg cag gag cgg cta cag gct gaa gag      3340
Leu Glu Ser Gln Asn Gln Leu Leu Gln Glu Arg Leu Gln Ala Glu Glu
1050                      1055                      1060                      1065

agg gag aag aca gtt ctg cag tct acc aat cga aaa ctg gag cgg aaa      3388
Arg Glu Lys Thr Val Leu Gln Ser Thr Asn Arg Lys Leu Glu Arg Lys
    1070                      1075                      1080

gtt aaa gaa cta tcc atc cag att gaa gac gag cgg cag cat gtc aat      3436
Val Lys Glu Leu Ser Ile Gln Ile Glu Asp Glu Arg Gln His Val Asn
    1085                      1090                      1095

gac cag aaa gac cag cta agc ctg agg gtg aag gct ttg aag cgt cag      3484
Asp Gln Lys Asp Gln Leu Ser Leu Arg Val Lys Ala Leu Lys Arg Gln
    1100                      1105                      1110

gtg gat gaa gca gaa gag gaa att gag cga ctg gac ggc ctg agg aag      3532
Val Asp Glu Ala Glu Glu Glu Ile Glu Arg Leu Asp Gly Leu Arg Lys
    1115                      1120                      1125

aag gcc cag cgt gag gtg gag gag cag cat gag gtc aat gaa cag ctc      3580
Lys Ala Gln Arg Glu Val Glu Glu Gln His Glu Val Asn Glu Gln Leu
1130                      1135                      1140                      1145

cag gcc cgg atc aag tct ctg gag aag gac tcc tgg cgc aaa gct tcc      3628
Gln Ala Arg Ile Lys Ser Leu Glu Lys Asp Ser Trp Arg Lys Ala Ser
    1150                      1155                      1160

cgc tca gct gct gag tca gct ctc aaa aac gaa ggg ctg agc tca gat      3676
Arg Ser Ala Ala Glu Ser Ala Leu Lys Asn Glu Gly Leu Ser Ser Asp
    1165                      1170                      1175

gag gaa ttc gac agt gtc tac gat ccc tcg tcc att gca tca ctg ctt      3724
Glu Glu Phe Asp Ser Val Tyr Asp Pro Ser Ser Ile Ala Ser Leu Leu
    1180                      1185                      1190

acg gag agc aac cta cag acc agc tcc tgt tag ctgctggt cctcaaggac      3775
Thr Glu Ser Asn Leu Gln Thr Ser Ser Cys *
    1195                      1200

tcagaaacca ggctcgaggc ctatcccagc aagtgtgtgt ctgctctgcc caccctgggt      3835

tctgcattcc tatgggtgac ccaattattc agacctaaga caggaggagg tcagagtgat      3895

ggtgataaaa aaaaaaaaaa                                              3913

```

<210> 943
 <211> 1978
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (257)..(1921)

```

<400> 943
cttggtatag gcgagacca agctggctag cgtttattcg taagcttggt accgagctcg      60

```

2610

Glu 220	Cys	Asp	Lys	Ala	Leu 225	Asn	His	Gly	Ser	His 230	Met	Thr	Val	Arg	Gln 235		
gta	agt	cat	tct	gga	gag	aaa	gga	tat	aaa	tgt	gat	ctg	tgt	ggc	aag	1009	
Val	Ser	His	Ser	Gly 240	Glu	Lys	Gly	Tyr	Lys 245	Cys	Asp	Leu	Cys	Gly 250	Lys		
gtc	ttt	agt	caa	aaa	tca	aac	ctt	gcg	cgt	cat	tgg	aga	gtt	cat	act	1057	
Val	Phe	Ser	Gln 255	Lys	Ser	Asn	Leu	Ala 260	Arg	His	Trp	Arg	Val 265	His	Thr		
gga	gag	aaa	cca	tac	aaa	tgt	aat	gaa	tgt	gac	aga	agt	ttc	agt	cgc	1105	
Gly	Glu	Lys 270	Pro	Tyr	Lys	Cys	Asn 275	Glu	Cys	Asp	Arg	Ser 280	Phe	Ser	Arg		
aac	tca	tgc	ctt	gca	cta	cat	cgg	aga	gtt	cac	act	gga	gag	aaa	cct	1153	
Asn	Ser	Cys	Leu	Ala	Leu	His 290	Arg	Arg	Val	His 295	Thr	Gly	Glu	Lys	Pro		
tac	aaa	tgt	tat	gag	tgt	gac	aag	gtc	ttc	agt	cga	aat	tca	tgc	ctt	1201	
Tyr	Lys	Cys	Tyr	Glu	Cys 305	Asp	Lys	Val	Phe	Ser 310	Arg	Asn	Ser	Cys	Leu 315		
gca	cta	cat	cag	aaa	act	cat	att	gga	gag	aaa	cct	tac	aca	tgt	aaa	1249	
Ala	Leu	His	Gln 320	Lys	Thr	His	Ile	Gly	Glu 325	Lys	Pro	Tyr	Thr	Cys 330	Lys		
gag	tgt	ggc	aaa	gcc	ttt	agt	gtg	agg	tca	aca	ctt	acc	aac	cat	cag	1297	
Glu	Cys	Gly 335	Lys	Ala	Phe	Ser	Val	Arg 340	Ser	Thr	Leu	Thr 345	Asn	His	Gln		
gta	att	cat	agt	ggc	aag	aaa	cct	tac	aaa	tgc	aat	gaa	tgt	ggc	aag	1345	
Val	Ile	His 350	Ser	Gly	Lys	Lys	Pro 355	Tyr	Lys	Cys	Asn	Glu 360	Cys	Gly	Lys		
gtg	ttc	agt	cag	act	tca	agc	ctt	gca	act	cat	cag	aga	att	cac	act	1393	
Val	Phe 365	Ser	Gln	Thr	Ser 370	Ser	Leu	Ala	Thr	His 375	Gln	Arg	Ile	His	Thr		
ggg	gag	aaa	cca	tac	aag	tgt	aat	gaa	tgt	ggg	aaa	gtc	ttc	agt	cag	1441	
Gly	Glu	Lys 380	Pro	Tyr	Lys 385	Cys	Asn	Glu	Cys 390	Gly	Lys	Val	Phe	Ser	Gln 395		
act	tca	agc	ctt	gca	agg	cat	tgg	aga	att	cat	act	gga	gag	aaa	cct	1489	
Thr	Ser	Ser	Leu 400	Ala	Arg	His	Trp	Arg 405	Ile	His	Thr	Gly	Glu 410	Lys	Pro		
tac	aaa	tgc	aat	gaa	tgt	ggg	aag	gtt	ttc	agt	tac	aat	tca	cac	ctt	1537	
Tyr	Lys	Cys 415	Asn	Glu	Cys	Gly	Lys	Val 420	Phe	Ser	Tyr	Asn	Ser 425	His	Leu		
gcg	agt	cat	cgg	aga	gtt	cat	act	gga	gag	aaa	cct	tac	aag	tgt	aat	1585	
Ala	Ser	His 430	Arg	Arg	Val	His	Thr 435	Gly	Glu	Lys	Pro 440	Tyr	Lys	Cys	Asn		
gag	tgt	ggg	aaa	gcc	ttt	agt	gtg	cat	tcg	aac	tta	act	acc	cat	cag	1633	
Glu	Cys 445	Gly	Lys	Ala	Phe 450	Ser	Val	His	Ser	Asn 455	Leu	Thr	Thr	His	Gln		
gtc	atc	cat	act	gga	gag	aag	cct	tac	aaa	tgt	aat	caa	tgt	ggc	aaa	1681	
Val	Ile 460	His	Thr	Gly	Glu 465	Lys	Pro	Tyr	Lys 470	Cys	Asn	Gln	Cys	Gly 475	Lys		
ggc	ttc	agt	gtg	cat	tca	agc	cta	act	acc	cat	cag	gtc	atc	cat	act	1729	

Gly Phe Ser Val	His Ser Ser Leu Thr Thr His Gln Val Ile His Thr	
	480 485 490	
gga gaa aaa cct	tac aaa tgt aat gag tgt ggc aaa tcc ttt agt gtg	1777
Gly Glu Lys Pro	Tyr Lys Cys Asn Glu Cys Gly Lys Ser Phe Ser Val	
	495 500 505	
cgc cca aac ctc	act aga cat cag ata atc cat act gga aag aaa cct	1825
Arg Pro Asn Leu	Thr Arg His Gln Ile Ile His Thr Gly Lys Lys Pro	
	510 515 520	
tac aaa tgt agt	gat tgt ggg aag tcc ttt agt gtg cgc cca aac ctc	1873
Tyr Lys Cys Ser	Asp Cys Gly Lys Ser Phe Ser Val Arg Pro Asn Leu	
	525 530 535	
ttc aga cat caa	att atc cat act aag gag aaa cct tat aaa aga aat	1921
Phe Arg His Gln	Ile Ile His Thr Lys Glu Lys Pro Tyr Lys Arg Asn	
	540 545 550 555	
taatatggca aggtcttcag	tcaaagttta aatcctgtga gtcacaaag aatttat	1978

<210> 944
 <211> 915
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (224) .. (865)

<400> 944	
tgcgccggaa ctcccgggtc gaccacgcgc tccgctgtgg tccttctgct aatgcaaaca	60
acaaaacggg cacactagtc acccccgagg gaggccacca tcaactgtaac tgttgcccaa	120
agctacaaaa gaagcgaggg aatccaaccg agcgcagcga cactgagaac agcttcccct	180
gccttctgcg gcggcagaag tgaagtgcct gaggaccgga agg atg gtg cag tcc	235
	Met Val Gln Ser
	1
tgc tcc gcc tac ggc tgc aag aac cgc tac gac aag gac aag ccc gtt	283
Cys Ser Ala Tyr Gly Cys Lys Asn Arg Tyr Asp Lys Asp Lys Pro Val	
5 10 15 20	
tct ttc cac aag ttt cct ctt act cga ccc agt ctt tgt aaa gaa tgg	331
Ser Phe His Lys Phe Pro Leu Thr Arg Pro Ser Leu Cys Lys Glu Trp	
25 30 35	
gag gca gct gtc aga aga aaa aac ttt aaa ccc acc aag tat agc agt	379
Glu Ala Ala Val Arg Arg Lys Asn Phe Lys Pro Thr Lys Tyr Ser Ser	
40 45 50	
att tgt tca gag cac ttt act cca gac tgc ttt aag aga gag tgc aac	427
Ile Cys Ser Glu His Phe Thr Pro Asp Cys Phe Lys Arg Glu Cys Asn	
55 60 65	
aac aag tta ctg aaa gag aat gct gtg ccc aca ata ttt ctt tgt act	475
Asn Lys Leu Leu Lys Glu Asn Ala Val Pro Thr Ile Phe Leu Cys Thr	
70 75 80	

```

gag cca cat gac aag aaa gaa gat ctt ctg gag cca cag gaa cag ctt      523
Glu Pro His Asp Lys Lys Glu Asp Leu Leu Glu Pro Gln Glu Gln Leu
 85                      90                      95                      100

ccc cca cct cct tta ccg cct cct gtt tcc cag gtt gat gct gct att      571
Pro Pro Pro Pro Leu Pro Pro Pro Val Ser Gln Val Asp Ala Ala Ile
          105                      110                      115

gga tta cta atg ccg cct ctt cag acc cct gtt aat ctc tca gtt ttc      619
Gly Leu Leu Met Pro Pro Leu Gln Thr Pro Val Asn Leu Ser Val Phe
          120                      125                      130

tgt gac cac aac tat act gtg gag gat aca atg cac cag cgg aaa agg      667
Cys Asp His Asn Tyr Thr Val Glu Asp Thr Met His Gln Arg Lys Arg
          135                      140                      145

att cat cag cta gaa cag caa gtt gaa aaa ctc aga aag aag ctc aag      715
Ile His Gln Leu Glu Gln Gln Val Glu Lys Leu Arg Lys Lys Leu Lys
          150                      155                      160

acc gca cag cag cga tgc aga agg caa gaa cgg cag ctt gaa aaa tta      763
Thr Ala Gln Gln Arg Cys Arg Arg Gln Glu Arg Gln Leu Glu Lys Leu
          165                      170                      175                      180

aag gag gtt gtt cac ttc cag aaa gag aaa gac gac gta tca gaa aga      811
Lys Glu Val Val His Phe Gln Lys Glu Lys Asp Asp Val Ser Glu Arg
          185                      190                      195

ggt tat gtg att cta cca aat gac tac ttt gaa ata gtt gaa gta cca      859
Gly Tyr Val Ile Leu Pro Asn Asp Tyr Phe Glu Ile Val Glu Val Pro
          200                      205                      210

gca taa aaaaatgaaa tgtgtattga tttctaattgg ggcaataacca catatcctcc      915
Ala *

```

<210> 945
 <211> 787
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (145)..(609)

```

<400> 945
taattcccgg gtcgacttcg ctgtcgacga tttcgtagcc gggcgccctca cctgtcagcc      60
gcaccggctc cagcgctcgc ctctcgccct tgcctctcca gcgctccttg ctcgcaaggc      120
gggggaggcg gcggcccagc cacg      atg ata cat ttc ata ttg ctc ttc agt      171
                                Met Ile His Phe Ile Leu Leu Phe Ser
                                1                      5

cga caa ggg aaa tta ccg cta cag aaa tgg tac atc act ctc cct gat      219
Arg Gln Gly Lys Leu Arg Leu Gln Lys Trp Tyr Ile Thr Leu Pro Asp
 10                      15                      20                      25

aaa gag agg aag aag atc acc cgg gaa att gtt cag att att ctc tcc      267
Lys Glu Arg Lys Lys Ile Thr Arg Glu Ile Val Gln Ile Ile Leu Ser

```


30

35

40

```

cgt ggt cac agg aca agc agt ttt gtt gac tgg aag gag cta aaa ctt      315
Arg Gly His Arg Thr Ser Ser Phe Val Asp Trp Lys Glu Leu Lys Leu
      45                      50                      55

ggt tat aaa agg tat gct agt tta tat ttt tgc tgt gca ata gaa aat      363
Val Tyr Lys Arg Tyr Ala Ser Leu Tyr Phe Cys Cys Ala Ile Glu Asn
      60                      65                      70

cag gac aat gag ctc ttg acg cta gag att gtg cat cgt tac gtg gag      411
Gln Asp Asn Glu Leu Leu Thr Leu Glu Ile Val His Arg Tyr Val Glu
      75                      80                      85

ctg ctg gac aaa tat ttt gga aat gtc tgt gag ctg gat att atc ttt      459
Leu Leu Asp Lys Tyr Phe Gly Asn Val Cys Glu Leu Asp Ile Ile Phe
      90                      95                      100                      105

aat ttt gaa aag gct tat ttc atc ctg gac gag ttt ata ata ggt ggg      507
Asn Phe Glu Lys Ala Tyr Phe Ile Leu Asp Glu Phe Ile Ile Gly Gly
      110                      115                      120

gaa att cag gaa aca tcc aag aaa att gct gtc aaa gcc att gaa gac      555
Glu Ile Gln Glu Thr Ser Lys Lys Ile Ala Val Lys Ala Ile Glu Asp
      125                      130                      135

tct gat atg tta cag gag gtc agt acg gtt tcc caa acc atg gga gaa      603
Ser Asp Met Leu Gln Glu Val Ser Thr Val Ser Gln Thr Met Gly Glu
      140                      145                      150

aga tga tgatgatgat gatgatgatg gtgttaataa ttataatatt aaccaagact      659
Arg *
      155

tactgagtac ttactctgtg ctgggtacag tttctaaact atttatatgt attagcttat      719

ttaatcctca caacaactcg aaaaagtagg tggatttggt actcccactt tacagatgag      779

taaactgg      787

```

<210> 946
 <211> 2083
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (569)..(2011)

<220>
 <221> misc_feature
 <222> (1)...(2083)
 <223> n = a,t,c or g

<400> 946

```

cgccccggt ccctgcctcc aggcgcgtac acggcgcgct aagaggcgcg gggagctctt      60
agcgcaccta ctacttaacc ggaccggcta cttactggcc gccagggtgga agcctgcgat      120
cgagctggcc gggcctccca gcaccgcgcg tctccaggct ccctttccag gactcaactt      180

```

2615

gac tca gga aga cag tgt aaa agt att aat ttt gaa gaa gca agt aca	1216
Asp Ser Gly Arg Gln Cys Lys Ser Ile Asn Phe Glu Glu Ala Ser Thr	
205 210 215	
gat gaa gct cag gtt ccc caa gga aat att gac cag gtt gct gtt gtg	1264
Asp Glu Ala Gln Val Pro Gln Gly Asn Ile Asp Gln Val Ala Val Val	
220 225 230	
gcc atc aat gtt ctg ttt ttt gtg act cta ttt atc ttt gcc ctt ttt	1312
Ala Ile Asn Val Leu Phe Phe Val Thr Leu Phe Ile Phe Ala Leu Phe	
235 240 245	
gaa acc atc att act cca tta aca atg gat atg tat gcc tgg act caa	1360
Glu Thr Ile Ile Thr Pro Leu Thr Met Asp Met Tyr Ala Trp Thr Gln	
250 255 260	
gaa caa gct gtg tta tat aat ggc ata ata ctt gct gct ctt ggg gtt	1408
Glu Gln Ala Val Leu Tyr Asn Gly Ile Ile Leu Ala Ala Leu Gly Val	
265 270 275 280	
gaa gcc gtt gtt att ttc tta gga gtt aag ttg ctt tcc aaa aag att	1456
Glu Ala Val Val Ile Phe Leu Gly Val Lys Leu Leu Ser Lys Lys Ile	
285 290 295	
ggc gag cgt gct att cta ctg gga gga ctc atc gtt gta tgg gtt ggc	1504
Gly Glu Arg Ala Ile Leu Leu Gly Gly Leu Ile Val Val Trp Val Gly	
300 305 310	
ttc ttt atc ttg tta cct tgg gga aat caa ttt ccc aaa ata cag tgg	1552
Phe Phe Ile Leu Leu Pro Trp Gly Asn Gln Phe Pro Lys Ile Gln Trp	
315 320 325	
gaa gat ttg cac aat aat tca atc cct aat acc aca ttt ggg gaa att	1600
Glu Asp Leu His Asn Asn Ser Ile Pro Asn Thr Thr Phe Gly Glu Ile	
330 335 340	
att att ggt ctt tgg aag tct cca atg gaa gat gac aat gaa aga cca	1648
Ile Ile Gly Leu Trp Lys Ser Pro Met Glu Asp Asp Asn Glu Arg Pro	
345 350 355 360	
act ggt tgc tgc att gaa caa gcc tgg tgc ctc tac acc ccg gtg att	1696
Thr Gly Cys Ser Ile Glu Gln Ala Trp Cys Leu Tyr Thr Pro Val Ile	
365 370 375	
cat ctg gcc cag ttc ctt aca tca gct gtg cta ata gga tta ggc tat	1744
His Leu Ala Gln Phe Leu Thr Ser Ala Val Leu Ile Gly Leu Gly Tyr	
380 385 390	
cca gtc tgc aat ctt atg tcc tat act cta tat tca aaa att cta gga	1792
Pro Val Cys Asn Leu Met Ser Tyr Thr Leu Tyr Ser Lys Ile Leu Gly	
395 400 405	
cca aaa cct cag ggt gta tac atg ggc tgg tta aca gca tct gga agt	1840
Pro Lys Pro Gln Gly Val Tyr Met Gly Trp Leu Thr Ala Ser Gly Ser	
410 415 420	
gga gcc cgg att ctt ggg cct atg ttc atc agc caa gtg tat gct cac	1888
Gly Ala Arg Ile Leu Gly Pro Met Phe Ile Ser Gln Val Tyr Ala His	
425 430 435 440	
tgg gga cca cga tgg gca ttc agc ctg gtg tgt gga ata ata gtg ctc	1936
Trp Gly Pro Arg Trp Ala Phe Ser Leu Val Cys Gly Ile Ile Val Leu	
445 450 455	

acc atc acc ctc ctg gga gtg gtt tac aaa aga ctc att gct ctt tct 1984
 Thr Ile Thr Leu Leu Gly Val Val Tyr Lys Arg Leu Ile Ala Leu Ser
 460 465 470

gta aga tat ggg agg att cag gaa taa actag ctaagactgt gatggaaaca 2036
 Val Arg Tyr Gly Arg Ile Gln Glu *
 475 480

cgaaatcgtc gacagcgaag tccctcnnn ntttccggac cgggacc 2083

<210> 947
 <211> 4079
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (134)..(3664)

<400> 947
 gcacgaggtg aagcgtgtgc tttagtcttcg tgggaggcct ggcacccccg agagggaggg 60
 gaaaggtaac cactcctttg tggaggtcgc cagggtcatt gtcgtggatt tgcacagtcg 120
 gctgggcggt gca atg gcg gaa aga aaa gga aca gcc aaa gtg gac ttt 169
 Met Ala Glu Arg Lys Gly Thr Ala Lys Val Asp Phe
 1 5 10
 ttg aag aag att gag aaa gaa atc caa cag aaa tgg gat act gag aga 217
 Leu Lys Lys Ile Glu Lys Glu Ile Gln Gln Lys Trp Asp Thr Glu Arg
 15 20 25
 gtg ttt gag gtc aat gca tct aat tta gag aaa cag acc agc aag ggc 265
 Val Phe Glu Val Asn Ala Ser Asn Leu Glu Lys Gln Thr Ser Lys Gly
 30 35 40
 aag tat ttt gta acc ttc cca tat cca tat atg aat gga cgc ctt cat 313
 Lys Tyr Phe Val Thr Phe Pro Tyr Pro Tyr Met Asn Gly Arg Leu His
 45 50 55 60
 ttg gga cac acg ttt tct tta tcc aaa tgt gag ttt gct gta ggg tac 361
 Leu Gly His Thr Phe Ser Leu Ser Lys Cys Glu Phe Ala Val Gly Tyr
 65 70 75
 cag cga ttg aaa gga aaa tgt tgt ctg ttt ccc ttt ggc ctg cac tgt 409
 Gln Arg Leu Lys Gly Lys Cys Cys Leu Phe Pro Phe Gly Leu His Cys
 80 85 90
 act gga atg cct att aag gca tgt gct gat aag ttg aaa aga gaa ata 457
 Thr Gly Met Pro Ile Lys Ala Cys Ala Asp Lys Leu Lys Arg Glu Ile
 95 100 105
 gag ctg tat ggt tgc ccc cct gat ttt cca gat gaa gaa gag gaa gag 505
 Glu Leu Tyr Gly Cys Pro Pro Asp Phe Pro Asp Glu Glu Glu Glu Glu
 110 115 120
 gaa gaa acc agt gtt aaa aca gaa gat ata ata att aag gat aaa gct 553
 Glu Glu Thr Ser Val Lys Thr Glu Asp Ile Ile Ile Lys Asp Lys Ala
 125 130 135 140
 aaa gga aaa aag agt aaa gct gct gct aaa gct gga tct tct aaa tac 601

Lys Gly Lys Lys Ser Lys Ala Ala Ala Lys Ala Gly Ser Ser Lys Tyr	
145 150 155	
cag tgg ggc att atg aaa tcc ctt ggc ctg tct gat gaa gag ata gta	649
Gln Trp Gly Ile Met Lys Ser Leu Gly Leu Ser Asp Glu Glu Ile Val	
160 165 170	
aaa ttt tct gaa gca gaa cat tgg ctt gat tat ttc acg cca ctg gct	697
Lys Phe Ser Glu Ala Glu His Trp Leu Asp Tyr Phe Thr Pro Leu Ala	
175 180 185	
att cag gat tta aaa aga atg ggt ttg aag gta gac tgg cgt cgt tcc	745
Ile Gln Asp Leu Lys Arg Met Gly Leu Lys Val Asp Trp Arg Arg Ser	
190 195 200	
ttc atc acc act gat gtt aat cct tac tat gat tca ttt gtc aga tgg	793
Phe Ile Thr Thr Asp Val Asn Pro Tyr Tyr Asp Ser Phe Val Arg Trp	
205 210 215 220	
caa ttt tta aca tta aga gaa aga aac aaa att aaa ttt ggg aag cgg	841
Gln Phe Leu Thr Leu Arg Glu Arg Asn Lys Ile Lys Phe Gly Lys Arg	
225 230 235	
tat aca att tac tct ccg aaa gat gga cag cct tgc atg gat cat gat	889
Tyr Thr Ile Tyr Ser Pro Lys Asp Gly Gln Pro Cys Met Asp His Asp	
240 245 250	
aga caa act gga gag ggt gtt gga cct cag gaa tat act tta ctc aaa	937
Arg Gln Thr Gly Glu Gly Val Gly Pro Gln Glu Tyr Thr Leu Leu Lys	
255 260 265	
ttg aag gtg ctt gag cca tac cca tct aaa tta agt ggc ctg aaa ggt	985
Leu Lys Val Leu Glu Pro Tyr Pro Ser Lys Leu Ser Gly Leu Lys Gly	
270 275 280	
aaa aat att ttc ttg gtg gct gct act ctc aga cct gag acc atg ttt	1033
Lys Asn Ile Phe Leu Val Ala Ala Thr Leu Arg Pro Glu Thr Met Phe	
285 290 295 300	
ggg cag aca aat tgt tgg gtt cgt cct gat atg aag tac att gga ttt	1081
Gly Gln Thr Asn Cys Trp Val Arg Pro Asp Met Lys Tyr Ile Gly Phe	
305 310 315	
gag acg gtg aat ggt gat ata ttc atc tgt acc caa aaa gca gcc agg	1129
Glu Thr Val Asn Gly Asp Ile Phe Ile Cys Thr Gln Lys Ala Ala Arg	
320 325 330	
aat atg tca tac cag ggc ttt acc aaa gac aat ggc gtg gtg cct gtt	1177
Asn Met Ser Tyr Gln Gly Phe Thr Lys Asp Asn Gly Val Val Pro Val	
335 340 345	
gtt aag gaa tta atg ggg gag gaa att ctt ggt gca tca ctt tct gca	1225
Val Lys Glu Leu Met Gly Glu Glu Ile Leu Gly Ala Ser Leu Ser Ala	
350 355 360	
cct tta aca tca tac aag gtg atc tat gtt ctc cca atg cta act att	1273
Pro Leu Thr Ser Tyr Lys Val Ile Tyr Val Leu Pro Met Leu Thr Ile	
365 370 375 380	
aag gag gat aaa ggc act ggt gtg gtt aca agt gtt cct tcc gac tcc	1321
Lys Glu Asp Lys Gly Thr Gly Val Val Thr Ser Val Pro Ser Asp Ser	
385 390 395	
cct gat gat att gct gcc ctc aga gac ttg aag aaa aag caa gcc tta	1369

Pro Asp Asp	Ile Ala Ala	Leu Arg Asp	Leu Lys Lys Lys	Gln Ala Leu	
	400	405		410	
cga gca aaa	tat gga att	aga gat gac	atg gtc ttg	cca ttt gag	ccg 1417
Arg Ala Lys	Tyr Gly Ile	Arg Asp Asp	Met Val Leu	Pro Phe Glu	Pro
	415	420		425	
gtg cca gtc	att gaa atc	cca ggt ttt	gga aat ctt	tct gct gta	acc 1465
Val Pro Val	Ile Glu Ile	Pro Gly Phe	Gly Asn Leu	Ser Ala Val	Thr
	430	435		440	
att tgt gat	gag ttg aaa	att cag agc	cag aat gac	cgg gaa aaa	ctt 1513
Ile Cys Asp	Glu Leu Lys	Ile Gln Ser	Gln Asn Asp	Arg Glu Lys	Leu
	445	450		455	460
gca gaa gca	aag gag aag	ata tat cta	aaa gga ttt	tat gag ggt	atc 1561
Ala Glu Ala	Lys Glu Lys	Ile Tyr Leu	Lys Gly Phe	Tyr Glu Gly	Ile
	465		470	475	
atg ttg gtg	gat gga ttt	aaa gga cag	aag gtt caa	gat gta aag	aag 1609
Met Leu Val	Asp Gly Phe	Lys Gly Gln	Lys Val Gln	Asp Val Lys	Lys
	480		485	490	
act att cag	aaa aag atg	att gac gct	gga gat gca	ctt att tac	atg 1657
Thr Ile Gln	Lys Lys Met	Ile Asp Ala	Gly Asp Ala	Leu Ile Tyr	Met
	495		500	505	
gaa cca gag	aaa caa gtg	atg tcc agg	tgc tca gat	gaa tgt gtt	gtg 1705
Glu Pro Glu	Lys Gln Val	Met Ser Arg	Ser Ser Asp	Glu Cys Val	Val
	510		515	520	
gct ctg tgt	gac cag tgg	tac ttg gat	tat gga gaa	gag aat tgg	aag 1753
Ala Leu Cys	Asp Gln Trp	Tyr Leu Asp	Tyr Gly Glu	Glu Glu Asn	Trp Lys
	525	530		535	540
aaa cag aca	tct cag tgc	ttg aag aac	ctg gaa aca	ttc tgt gag	gag 1801
Lys Gln Thr	Ser Gln Cys	Leu Lys Asn	Leu Glu Thr	Phe Cys Glu	Glu
	545		550	555	
acc agg agg	aat ttt gaa	gcc acc tta	ggt tgg cta	caa gaa cat	gct 1849
Thr Arg Arg	Asn Phe Glu	Ala Thr Leu	Gly Trp Leu	Gln Glu His	Ala
	560		565	570	
tgc tca aga	act tat ggt	cta ggc act	cac ttg cct	tgg gat gag	cag 1897
Cys Ser Arg	Thr Tyr Gly	Leu Gly Thr	His Leu Pro	Trp Asp Glu	Gln
	575		580	585	
tgg ctg att	gaa tca ctt	tct gac tcc	act att tac	atg gca ttt	tac 1945
Trp Leu Ile	Glu Ser Leu	Ser Asp Ser	Thr Ile Tyr	Met Ala Phe	Tyr
	590		595	600	
aca gtt gca	cac cta ttg	cag ggg ggt	aac ttg cat	gga cag gca	gag 1993
Thr Val Ala	His Leu Leu	Gln Gly Gly	Asn Leu His	Gly Gln Ala	Glu
	605	610		615	620
tct ccg ctg	ggc att aga	ccg caa cag	atg acc aag	gaa gtt tgg	gat 2041
Ser Pro Leu	Gly Ile Arg	Pro Gln Gln	Met Thr Lys	Glu Val Trp	Asp
	625		630	635	
tat gtt ttc	ttc aag gag	gct cca ttt	cct aag act	cag att gca	aag 2089
Tyr Val Phe	Glu Lys Glu	Ala Pro Phe	Pro Lys Thr	Gln Ile Ala	Lys
	640		645	650	
gaa aaa tta	gat cag tta	aag cag gag	ttt gaa ttc	tgg tat cct	gtt 2137

Glu Lys Leu Asp Gln Leu Lys Gln Glu Phe Glu Phe Trp Tyr Pro Val	655	660	665	
gat ctt cgc gtc tct ggc aag gat ctt gtt cca aat cat ctt tca tat				2185
Asp Leu Arg Val Ser Gly Lys Asp Leu Val Pro Asn His Leu Ser Tyr	670	675	680	
tac ctt tat aat cat gtg gct atg tgg ccg gaa caa agt gac aaa tgg				2233
Tyr Leu Tyr Asn His Val Ala Met Trp Pro Glu Gln Ser Asp Lys Trp	685	690	695	700
cct aca gct gtg aga gca aat gga cat ctc ctc ctg aac tct gag aag				2281
Pro Thr Ala Val Arg Ala Asn Gly His Leu Leu Leu Asn Ser Glu Lys	705	710	715	
atg tca aaa tcc aca ggc aac ttc ctc act ttg acc caa gct att gac				2329
Met Ser Lys Ser Thr Gly Asn Phe Leu Thr Leu Thr Gln Ala Ile Asp	720	725	730	
aaa ttt tca gca gat gga atg cgt ttg gct ctg gct gat gct ggt gac				2377
Lys Phe Ser Ala Asp Gly Met Arg Leu Ala Leu Ala Asp Ala Gly Asp	735	740	745	
act gta gaa gat gcc aac ttt gtg gaa gcc atg gca gat gca ggt att				2425
Thr Val Glu Asp Ala Asn Phe Val Glu Ala Met Ala Asp Ala Gly Ile	750	755	760	
ctc cgt ctg tac acc tgg gta gag tgg gtg aaa gaa atg gtt gcc aac				2473
Leu Arg Leu Tyr Thr Trp Val Glu Trp Val Lys Glu Met Val Ala Asn	765	770	775	780
tgg gac agc cta aga agt ggt cct gcc agc act ttc aat gat aga gtt				2521
Trp Asp Ser Leu Arg Ser Gly Pro Ala Ser Thr Phe Asn Asp Arg Val	785	790	795	
ttt gcc agt gaa ttg aat gca gga att ata aaa aca gat caa aac tat				2569
Phe Ala Ser Glu Leu Asn Ala Gly Ile Ile Lys Thr Asp Gln Asn Tyr	800	805	810	
gaa aag atg atg ttt aaa gaa gct ttg aaa aca ggg ttt ttt gag ttt				2617
Glu Lys Met Met Phe Lys Glu Ala Leu Lys Thr Gly Phe Phe Glu Phe	815	820	825	
cag gcc gca aaa gat aag tac cgt gaa ttg gct gtg gaa ggg atg cac				2665
Gln Ala Ala Lys Asp Lys Tyr Arg Glu Leu Ala Val Glu Gly Met His	830	835	840	
aga gaa ctt gtg ttc cgg ttt att gaa gtt cag aca ctt ctc ctc gct				2713
Arg Glu Leu Val Phe Arg Phe Ile Glu Val Gln Thr Leu Leu Leu Ala	845	850	855	860
cca ttc tgt cca cat ttg tgt gag cac atc tgg aca ctc ctg gga aag				2761
Pro Phe Cys Pro His Leu Cys Glu His Ile Trp Thr Leu Leu Gly Lys	865	870	875	
cct gac tca att atg aat gct tca tgg cct gtg gca ggt cct gtt aat				2809
Pro Asp Ser Ile Met Asn Ala Ser Trp Pro Val Ala Gly Pro Val Asn	880	885	890	
gaa gtt tta ata cac tcc tca cag tat ctt atg gaa gta aca cat gac				2857
Glu Val Leu Ile His Ser Ser Gln Tyr Leu Met Glu Val Thr His Asp	895	900	905	
ctt aga cta cga ctc aag aac tat atg atg cca gct aaa ggg aag aag				2905

Leu Arg Leu Arg Leu Lys Asn Tyr Met Met Pro Ala Lys Gly Lys Lys	
910 915 920	
act gac aaa caa ccc ctg cag aag ccc tca cat tgc acc atc tat gtg	2953
Thr Asp Lys Gln Pro Leu Gln Lys Pro Ser His Cys Thr Ile Tyr Val	
925 930 935 940	
gca aag aac tat cca cct tgg caa cat acc acc ctg tct gtt cta cgt	3001
Ala Lys Asn Tyr Pro Pro Trp Gln His Thr Thr Leu Ser Val Leu Arg	
945 950 955	
aaa cac ttt gag gcc aat aac gga aaa ctg cct gac aac aaa gtc att	3049
Lys His Phe Glu Ala Asn Asn Gly Lys Leu Pro Asp Asn Lys Val Ile	
960 965 970	
gct agt gaa cta ggc agt atg cca gaa ctg aag aaa tac atg aag aaa	3097
Ala Ser Glu Leu Gly Ser Met Pro Glu Leu Lys Lys Tyr Met Lys Lys	
975 980 985	
gtc atg cca ttt gtt gcc atg att aag gaa aat ctg gag aag atg ggg	3145
Val Met Pro Phe Val Ala Met Ile Lys Glu Asn Leu Glu Lys Met Gly	
990 995 1000	
cct cgt att ctg gat ttg caa tta gaa ttt gat gaa aag gct gtg ctt	3193
Pro Arg Ile Leu Asp Leu Gln Leu Glu Phe Asp Glu Lys Ala Val Leu	
1005 1010 1015 1020	
atg gag aat ata gtc tat ctg act aat tgc ctt gag cta gaa cac ata	3241
Met Glu Asn Ile Val Tyr Leu Thr Asn Ser Leu Glu Leu Glu His Ile	
1025 1030 1035	
gaa gtc aag ttt gcc tcc gaa gca gaa gat aaa atc agg gaa gac tgc	3289
Glu Val Lys Phe Ala Ser Glu Ala Glu Asp Lys Ile Arg Glu Asp Cys	
1040 1045 1050	
tgt cct ggg aaa cca ctt aat gtt ttt aga ata gaa cct ggt gtg tcc	3337
Cys Pro Gly Lys Pro Leu Asn Val Phe Arg Ile Glu Pro Gly Val Ser	
1055 1060 1065	
gtt tct ctg gtg aat ccc cag cca tcc aat ggc cac ttc tca acc aaa	3385
Val Ser Leu Val Asn Pro Gln Pro Ser Asn Gly His Phe Ser Thr Lys	
1070 1075 1080	
att gaa atc aag caa gga gat aac tgt gat tcc ata atc agg cgt tta	3433
Ile Glu Ile Lys Gln Gly Asp Asn Cys Asp Ser Ile Ile Arg Arg Leu	
1085 1090 1095 1100	
atg aaa atg aat cga gga att aaa gac ctt tcc aaa gtg aaa ctg atg	3481
Met Lys Met Asn Arg Gly Ile Lys Asp Leu Ser Lys Val Lys Leu Met	
1105 1110 1115	
aga ttt gat gat cca ctg ttg ggg cct cga cga gtt cct gtc ctg gga	3529
Arg Phe Asp Asp Pro Leu Leu Gly Pro Arg Arg Val Pro Val Leu Gly	
1120 1125 1130	
aag gag tac acc gag aag acc ccc att tct gag cat gct gtt ttc aat	3577
Lys Glu Tyr Thr Glu Lys Thr Pro Ile Ser Glu His Ala Val Phe Asn	
1135 1140 1145	
gtg gac ctc atg agc aag aaa att cat ctg act gag aat ggg ata agg	3625
Val Asp Leu Met Ser Lys Lys Ile His Leu Thr Glu Asn Gly Ile Arg	
1150 1155 1160	
gtg gat att ggc gat aca ata atc tat ctg gtt cat taa actcatgcac	3674

Val Asp Ile Gly Asp Thr Ile Ile Tyr Leu Val His *
 1165 1170 1175

attggagatt tatcctgggt tcttaggaat actactactc tgattgtgtc tactgattgg 3734
 ctatcagaac cttaggctgg acctaaatag attgatttca tttctaacca tccaattctg 3794
 catgtattca taattctatc aagtcattctt tgattcctgg acctaatataa ttttttttcc 3854
 cttttcttgg gtgtccaaga gaaatggttt ttgccaaact cttttttaaaa aacaaattgt 3914
 tgctatttcc tagaagtttc tggtttttaa gatgaacata aaagtgtcag tatgcttctt 3974
 ttatgaggtg tactttatac tttgatgaag gctaaggtgt acctaacagc tttttatagt 4034
 atattcattt atggagttag ctgtattttt tttaaaaaaa aaaaa 4079

<210> 948
 <211> 5352
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (109)..(5229)

<400> 948
 attttccggg tcgacgattt cgtgcgactc tcggtcgtgc agcggcggcg agcgcctcgcg 60
 agcggctcgcg ggacgcgagg tttccggagc tgagctcaat gtgcagca atg gat gac 117
 Met Asp Asp
 1
 gac agc ctg gat gag ctt gtg gcc cgg agc cca ggg ccg gat gga cac 165
 Asp Ser Leu Asp Glu Leu Val Ala Arg Ser Pro Gly Pro Asp Gly His
 5 10 15
 cca cag gtc ggc cct gcg gac ccg gca ggt gac ttt gaa gaa agc agc 213
 Pro Gln Val Gly Pro Ala Asp Pro Ala Gly Asp Phe Glu Glu Ser Ser
 20 25 30 35
 gtg ggc agc agt ggg gac tct ggg gac gac agt gac agc gag cat gga 261
 Val Gly Ser Ser Gly Asp Ser Gly Asp Asp Ser Asp Ser Glu His Gly
 40 45 50
 gat ggc aca gac gga gaa gac gag ggg gcg tct gag gag gaa gac ctg 309
 Asp Gly Thr Asp Gly Glu Asp Glu Gly Ala Ser Glu Glu Glu Asp Leu
 55 60 65
 gaa gac aga tct ggt tcc gag gat tct gaa gac gac ggg gag aca ttg 357
 Glu Asp Arg Ser Gly Ser Glu Asp Ser Glu Asp Asp Gly Glu Thr Leu
 70 75 80
 ctg gag gta gcg ggt act cag ggg aaa ctg gaa gcc gct ggc tct ttc 405
 Leu Glu Val Ala Gly Thr Gln Gly Lys Leu Glu Ala Ala Gly Ser Phe
 85 90 95
 aat tct gat gat gat gca gag agc tgc cca atc tgt ctc aac gca ttc 453
 Asn Ser Asp Asp Asp Ala Glu Ser Cys Pro Ile Cys Leu Asn Ala Phe
 100 105 110 115

aga gac cag gcc gtg ggg acg ccg gag aac tgt gcc cat tac ttc tgc	501
Arg Asp Gln Ala Val Gly Thr Pro Glu Asn Cys Ala His Tyr Phe Cys	
120 125 130	
ctg gac tgc att gtc gaa tgg tcc aag aat gcc aat tcc tgt cca gtt	549
Leu Asp Cys Ile Val Glu Trp Ser Lys Asn Ala Asn Ser Cys Pro Val	
135 140 145	
gat cga act cta ttt aag tgc att tgt att cga gct caa ttt ggt ggt	597
Asp Arg Thr Leu Phe Lys Cys Ile Cys Ile Arg Ala Gln Phe Gly Gly	
150 155 160	
aaa atc tta aaa aag atc cca gtg gag aac acc aaa gcg agc gag gag	645
Lys Ile Leu Lys Lys Ile Pro Val Glu Asn Thr Lys Ala Ser Glu Glu	
165 170 175	
gag gag gac ccg acc ttc tgt gag gtg tgc ggc agg agc gac cgt gag	693
Glu Glu Asp Pro Thr Phe Cys Glu Val Cys Gly Arg Ser Asp Arg Glu	
180 185 190 195	
gac agg ctt ttg ctc tgc gac ggc tgc gat gcg ggg tac cac atg gaa	741
Asp Arg Leu Leu Leu Cys Asp Gly Cys Asp Ala Gly Tyr His Met Glu	
200 205 210	
tgc ttg gac ccc cct ctc cag gag gtg ccg gtg gac gag tgg ttc tgc	789
Cys Leu Asp Pro Pro Leu Gln Glu Val Pro Val Asp Glu Trp Phe Cys	
215 220 225	
ccg gaa tgt gct gcg cct ggt gtt gtc ctt gcc gct gat gcg ggt ccc	837
Pro Glu Cys Ala Ala Pro Gly Val Val Leu Ala Ala Asp Ala Gly Pro	
230 235 240	
gtg agt gag gag gag gtc tcc ctg ctc ttg gct gat gtg gtg ccc acc	885
Val Ser Glu Glu Glu Val Ser Leu Leu Leu Ala Asp Val Val Pro Thr	
245 250 255	
acc agc agg ctt cgg cct cga gca ggt agg acc cgg gcg ata gcc agg	933
Thr Ser Arg Leu Arg Pro Arg Ala Gly Arg Thr Arg Ala Ile Ala Arg	
260 265 270 275	
aca cgg cag agt gag aga gtg aga gca acc gtg aac cgg aac cgg atc	981
Thr Arg Gln Ser Glu Arg Val Arg Ala Thr Val Asn Arg Asn Arg Ile	
280 285 290	
tcc acg gcc agg agg gtc cag cac aca cca ggg cgc ctc ggg tct tcc	1029
Ser Thr Ala Arg Arg Val Gln His Thr Pro Gly Arg Leu Gly Ser Ser	
295 300 305	
ctg ctg gat gaa gcc atc gag gct gtg gcg act ggc ctg agc act gcc	1077
Leu Leu Asp Glu Ala Ile Glu Ala Val Ala Thr Gly Leu Ser Thr Ala	
310 315 320	
gtg tat cag cgc ccc ctg acg ccg cgc act ccc gcc cga cgg aag agg	1125
Val Tyr Gln Arg Pro Leu Thr Pro Arg Thr Pro Ala Arg Arg Lys Arg	
325 330 335	
aag aca aga aga cgg aag aaa gtg ccg gga aga aag aaa acc ccg tcc	1173
Lys Thr Arg Arg Arg Lys Lys Val Pro Gly Arg Lys Lys Thr Pro Ser	
340 345 350 355	
gga cca tcc gca aaa agt aag agc tca gcg aca aga tct aag aaa cgc	1221
Gly Pro Ser Ala Lys Ser Lys Ser Ser Ala Thr Arg Ser Lys Lys Arg	
360 365 370	

caa cat cga gtg aag aag aga aga ggg aag aag gta aag agt gaa gcc	1269
Gln His Arg Val Lys Lys Arg Arg Gly Lys Lys Val Lys Ser Glu Ala	
375 380 385	
acc act cgc tct cga atc gcg cgg acg ctg ggc ctg cgc agg cct gtt	1317
Thr Thr Arg Ser Arg Ile Ala Arg Thr Leu Gly Leu Arg Arg Pro Val	
390 395 400	
cac agc agc tgc atc ccg tca gtg ttg aag cca gtg gag ccc tct ttg	1365
His Ser Ser Cys Ile Pro Ser Val Leu Lys Pro Val Glu Pro Ser Leu	
405 410 415	
ggg ctg ctg aga gcg gat att gga gct gcc tct ctg tct ctg ttt gga	1413
Gly Leu Leu Arg Ala Asp Ile Gly Ala Ala Ser Leu Ser Leu Phe Gly	
420 425 430 435	
gat cct tat gag ctg gat ccc ttc gac agc agt gaa gag ctt tct gca	1461
Asp Pro Tyr Glu Leu Asp Pro Phe Asp Ser Ser Glu Glu Leu Ser Ala	
440 445 450	
aac cct ctt tcc cct ctg agt gcc aag aga cgg gct ctg tcc cgg tca	1509
Asn Pro Leu Ser Pro Leu Ser Ala Lys Arg Arg Ala Leu Ser Arg Ser	
455 460 465	
gcc ctg cag tcc cac cag ccc gtg gcc agg ccc gtc tcc gtg ggg ctt	1557
Ala Leu Gln Ser His Gln Pro Val Ala Arg Pro Val Ser Val Gly Leu	
470 475 480	
tcc agg agg cgc ctc cct gcc gcg gtg cca gag cca gac ttg gag gag	1605
Ser Arg Arg Arg Leu Pro Ala Ala Val Pro Glu Pro Asp Leu Glu Glu	
485 490 495	
gag cca gtg cct gac ctg ctg ggc agc atc ctg tcg ggc cag agc ctc	1653
Glu Pro Val Pro Asp Leu Leu Gly Ser Ile Leu Ser Gly Gln Ser Leu	
500 505 510 515	
ctg atg ctg ggc agc agt gat gtc atc atc cac cgc gac ggc tcc ctc	1701
Leu Met Leu Gly Ser Ser Asp Val Ile Ile His Arg Asp Gly Ser Leu	
520 525 530	
agc gcc aag agg gcg gct cca gtt tct ttt cag cga aac tca ggc agt	1749
Ser Ala Lys Arg Ala Ala Pro Val Ser Phe Gln Arg Asn Ser Gly Ser	
535 540 545	
ctg tcc aga ggg gaa gaa gga ttc aag ggc tgc ctg cag ccc cga gca	1797
Leu Ser Arg Gly Glu Glu Gly Phe Lys Gly Cys Leu Gln Pro Arg Ala	
550 555 560	
ctg ccc tcc ggg agc ccg gcc caa ggc ccg tca gga aac agg cca cag	1845
Leu Pro Ser Gly Ser Pro Ala Gln Gly Pro Ser Gly Asn Arg Pro Gln	
565 570 575	
agc aca ggg ctc agc tgt caa ggc agg tcc cgc acc ccc gcc cgc acc	1893
Ser Thr Gly Leu Ser Cys Gln Gly Arg Ser Arg Thr Pro Ala Arg Thr	
580 585 590 595	
gcg ggg gcg cct gtg agg ctg gac ttg cca gca gcc cct ggg gcg gtt	1941
Ala Gly Ala Pro Val Arg Leu Asp Leu Pro Ala Ala Pro Gly Ala Val	
600 605 610	
cag gct cgg aac ttg tca aat ggg agt gtg cct ggc ttc aga cag agc	1989
Gln Ala Arg Asn Leu Ser Asn Gly Ser Val Pro Gly Phe Arg Gln Ser	
615 620 625	

cac agc ccc tgg ttc aac ggc acc aac aag cac acc ttg ccc ctt gcc	2037
His Ser Pro Trp Phe Asn Gly Thr Asn Lys His Thr Leu Pro Leu Ala	
630 635 640	
tct gcc gcg tct aag atc tca agc aga gat tct aag ccc cca tgt cgc	2085
Ser Ala Ala Ser Lys Ile Ser Ser Arg Asp Ser Lys Pro Pro Cys Arg	
645 650 655	
agt gtg gtg ccg ggg cct ccc ctg aag cca gcg ccc aga aga aca gac	2133
Ser Val Val Pro Gly Pro Pro Leu Lys Pro Ala Pro Arg Arg Thr Asp	
660 665 670 675	
atc tct gag cta ccc agg ata cca aag atc agg aga gat gac ggt ggt	2181
Ile Ser Glu Leu Pro Arg Ile Pro Lys Ile Arg Arg Asp Asp Gly Gly	
680 685 690	
ggc aga cgg gat gcg gcc ccg gcc cac ggg cag agc att gag atc ccc	2229
Gly Arg Arg Asp Ala Ala Pro Ala His Gly Gln Ser Ile Glu Ile Pro	
695 700 705	
agt gcc tgc atc agc cga ctg act ggc agg gag ggc acc ggg cag cca	2277
Ser Ala Cys Ile Ser Arg Leu Thr Gly Arg Glu Gly Thr Gly Gln Pro	
710 715 720	
ggg cga ggc aca cgg gca gag agc gag gcc agc agc agg gtg ccc cgg	2325
Gly Arg Gly Thr Arg Ala Glu Ser Glu Ala Ser Ser Arg Val Pro Arg	
725 730 735	
gag ccc ggg gtg cac acg ggc agc tcc cgg ccc cca gcc ccc agc tcc	2373
Glu Pro Gly Val His Thr Gly Ser Ser Arg Pro Pro Ala Pro Ser Ser	
740 745 750 755	
cat ggc agt ttg gcc cca ctg gga cca tca aga ggg aaa ggg gtc ggg	2421
His Gly Ser Leu Ala Pro Leu Gly Pro Ser Arg Gly Lys Gly Val Gly	
760 765 770	
tcg acc ttt gag agc ttc cgg atc aat att cct gga aac atg gca cat	2469
Ser Thr Phe Glu Ser Phe Arg Ile Asn Ile Pro Gly Asn Met Ala His	
775 780 785	
tcc agc cag ctc tcc agc cct ggc ttc tgt aac acg ttc cgg cct gtg	2517
Ser Ser Gln Leu Ser Ser Pro Gly Phe Cys Asn Thr Phe Arg Pro Val	
790 795 800	
gac gat aag gag cag agg aag gag aac ccc tca ccc ctc ttc tcc atc	2565
Asp Asp Lys Glu Gln Arg Lys Glu Asn Pro Ser Pro Leu Phe Ser Ile	
805 810 815	
aag aag acg aag cag ctg cgg agc gag gtc tac gac cca tcc gac ccc	2613
Lys Lys Thr Lys Gln Leu Arg Ser Glu Val Tyr Asp Pro Ser Asp Pro	
820 825 830 835	
acc ggc tcc gac tcc agc gcc cct ggc agc agc ccc gag agg tct ggc	2661
Thr Gly Ser Asp Ser Ser Ala Pro Gly Ser Ser Pro Glu Arg Ser Gly	
840 845 850	
ccc ggc ctc ctg ccc tct gag atc aca cga acc atc tcc atc aac agc	2709
Pro Gly Leu Leu Pro Ser Glu Ile Thr Arg Thr Ile Ser Ile Asn Ser	
855 860 865	
ccg aag gcc cag acg gtg cag gct gtg cgc tgc gtc acc tcc tac acg	2757
Pro Lys Ala Gln Thr Val Gln Ala Val Arg Cys Val Thr Ser Tyr Thr	
870 875 880	

gtg gag agc atc ttt ggt aca gag ccc gaa ccc cct ctc gga ccg tcc	2805
Val Glu Ser Ile Phe Gly Thr Glu Pro Glu Pro Pro Leu Gly Pro Ser	
885 890 895	
tcc gcc atg tcc aag ctc cgg ggt gca gtg gct gcc gag ggg gcc tct	2853
Ser Ala Met Ser Lys Leu Arg Gly Ala Val Ala Ala Glu Gly Ala Ser	
900 905 910 915	
gac acg gag cga gag gag ccc aca gag agc cag gcc ctg gct gcc cgg	2901
Asp Thr Glu Arg Glu Glu Pro Thr Glu Ser Gln Gly Leu Ala Ala Arg	
920 925 930	
ctg cgg agg cca tcc ccc cca gag ccc tgg gat gag gag gat ggg gcg	2949
Leu Arg Arg Pro Ser Pro Pro Glu Pro Trp Asp Glu Glu Asp Gly Ala	
935 940 945	
tct tgc agc acc ttc ttt ggc tct gag gag cgg acg gtg acc tgt gtg	2997
Ser Cys Ser Thr Phe Phe Gly Ser Glu Glu Arg Thr Val Thr Cys Val	
950 955 960	
act gtc gtg gag ccg gaa gcc cca ccc agc ccg gac gtg ctg cag gct	3045
Thr Val Val Glu Pro Glu Ala Pro Pro Ser Pro Asp Val Leu Gln Ala	
965 970 975	
gcc acc cac aga gtc gtg gag ctc agg ccc cct tcc cgg tcc cgc tcc	3093
Ala Thr His Arg Val Val Glu Leu Arg Pro Pro Ser Arg Ser Arg Ser	
980 985 990 995	
aca tcc agc tcc cgc agc agg aag aag gcc aag agg aag agg gtg tcc	3141
Thr Ser Ser Ser Arg Ser Arg Lys Lys Ala Lys Arg Lys Arg Val Ser	
1000 1005 1010	
agg gag cac gga cgg acg cgc tct ggg acg cgc tct gaa tcc agg gac	3189
Arg Glu His Gly Arg Thr Arg Ser Gly Thr Arg Ser Glu Ser Arg Asp	
1015 1020 1025	
agg agc tcg agg tca gcg tca cca tca gtg ggt gag gag cgc ccc agg	3237
Arg Ser Ser Arg Ser Ala Ser Pro Ser Val Gly Glu Glu Arg Pro Arg	
1030 1035 1040	
agg cag cgg tcc aag gcc aag agc cgg cgg tcc tcc agt gac cgc tcc	3285
Arg Gln Arg Ser Lys Ala Lys Ser Arg Arg Ser Ser Ser Asp Arg Ser	
1045 1050 1055	
agc agc cga gag cga gct aag agg aag aaa gcc aag gac aag agc agg	3333
Ser Ser Arg Glu Arg Ala Lys Arg Lys Lys Ala Lys Asp Lys Ser Arg	
1060 1065 1070 1075	
gag cac agg cgg ggc ccc tgg ggc cac agc cgg agg acg tcc cgg tcg	3381
Glu His Arg Arg Gly Pro Trp Gly His Ser Arg Arg Thr Ser Arg Ser	
1080 1085 1090	
cgg tcg ggg agc cct ggc agc tct tcc tat gag cac tat gag agt aga	3429
Arg Ser Gly Ser Pro Gly Ser Ser Ser Tyr Glu His Tyr Glu Ser Arg	
1095 1100 1105	
aaa aaa aaa aaa agg aga tca gcg tcc aga cct cgg gga agg gag tgc	3477
Lys Lys Lys Lys Arg Arg Ser Ala Ser Arg Pro Arg Gly Arg Glu Cys	
1110 1115 1120	
tcc ccc acc agc agc ctg gag agg ctc tgc agg cac aag cat cag cgg	3525
Ser Pro Thr Ser Ser Leu Glu Arg Leu Cys Arg His Lys His Gln Arg	
1125 1130 1135	

gaa cgc agc cac gag cgg cca gac agg aag gag agt gtg gcg tgg ccc Glu Arg Ser His Glu Arg Pro Asp Arg Lys Glu Ser Val Ala Trp Pro 1140 1145 1150 1155	3573
cga gac cgg agg aag cgg agg tcc cgg tcc cca agc tcg gag cac agg Arg Asp Arg Arg Lys Arg Arg Ser Arg Ser Pro Ser Ser Glu His Arg 1160 1165 1170	3621
gca cgg gag cac agg cgg cct cgg tcc cgt gag aag tgg ccg cag acc Ala Arg Glu His Arg Arg Pro Arg Ser Arg Glu Lys Trp Pro Gln Thr 1175 1180 1185	3669
cgg tcc cat tcc cca gag agg aag ggg gct gtg agg gag gct tcc cca Arg Ser His Ser Pro Glu Arg Lys Gly Ala Val Arg Glu Ala Ser Pro 1190 1195 1200	3717
gcg ccc ctt gca cag ggg gag cca ggg cgg gaa gac ctc ccc acc agg Ala Pro Leu Ala Gln Gly Glu Pro Gly Arg Glu Asp Leu Pro Thr Arg 1205 1210 1215	3765
ttg cca gcc ttg ggg gaa gca cat gtc tcg ccg gag gtg gct acg gcc Leu Pro Ala Leu Gly Glu Ala His Val Ser Pro Glu Val Ala Thr Ala 1220 1225 1230 1235	3813
gac aag gcc ccc ctg cag gct ccc cct gtc ctg gag gtg gca gct gag Asp Lys Ala Pro Leu Gln Ala Pro Pro Val Leu Glu Val Ala Ala Glu 1240 1245 1250	3861
tgt gag ccg gac gac ctg gac ctg gat tat ggc gac tcc gtg gag gcc Cys Glu Pro Asp Asp Leu Asp Leu Asp Tyr Gly Asp Ser Val Glu Ala 1255 1260 1265	3909
gga cac gtc ttt gat gat ttc tca agc gac gcc gtt ttc atc cag ctc Gly His Val Phe Asp Asp Phe Ser Ser Asp Ala Val Phe Ile Gln Leu 1270 1275 1280	3957
gat gac atg agc tcg cca cct tct ccc gaa agc aca gac tct tcc ccg Asp Asp Met Ser Ser Pro Pro Ser Pro Glu Ser Thr Asp Ser Ser Pro 1285 1290 1295	4005
gag cga gac ttc cca ctg aag cct gcg ttg ccc cca gcc agc ctg gcc Glu Arg Asp Phe Pro Leu Lys Pro Ala Leu Pro Pro Ala Ser Leu Ala 1300 1305 1310 1315	4053
gtg gcc gcc atc cag agg gag gtg tca ttg atg cac gat gaa gac cct Val Ala Ala Ile Gln Arg Glu Val Ser Leu Met His Asp Glu Asp Pro 1320 1325 1330	4101
tcg cag ccc cca ccc ctg cca gag ggc acc cag gag cca cat ttg ctc Ser Gln Pro Pro Pro Leu Pro Glu Gly Thr Gln Glu Pro His Leu Leu 1335 1340 1345	4149
agg ccg gac gcg gct gag aag gct gag gca ccc agt tcc ccg gat gtg Arg Pro Asp Ala Ala Glu Lys Ala Glu Ala Pro Ser Ser Pro Asp Val 1350 1355 1360	4197
gcg cct gcg ggg aag gaa gac agc ccc tct gcg agt ggg agg gta cag Ala Pro Ala Gly Lys Glu Asp Ser Pro Ser Ala Ser Gly Arg Val Gln 1365 1370 1375	4245
gag gca gcc cgg cct gag gag gtg gtt tcg cag acc ccc ctg ctg cgg Glu Ala Ala Arg Pro Glu Glu Val Val Ser Gln Thr Pro Leu Leu Arg 1380 1385 1390 1395	4293

tcc aga gcc ctg gtg aag cgg gtc acc tgg aac ctg cag gag tcg gag	4341
Ser Arg Ala Leu Val Lys Arg Val Thr Trp Asn Leu Gln Glu Ser Glu	
1400 1405 1410	
agc agc gcc ccc gcc gag gac aga gcc ccc cgg ggc acc act tca cag	4389
Ser Ser Ala Pro Ala Glu Asp Arg Ala Pro Arg Gly Thr Thr Ser Gln	
1415 1420 1425	
gcc aca gaa gcc ccg aga agg agc ctg gga cat gga gga tgt ggc ccc	4437
Ala Thr Glu Ala Pro Arg Arg Ser Leu Gly His Gly Gly Cys Gly Pro	
1430 1435 1440	
cac agg ggt cag gca ggc gtt ctc cga gct gcc ctt tcc cag tca cgt	4485
His Arg Gly Gln Ala Gly Val Leu Arg Ala Ala Leu Ser Gln Ser Arg	
1445 1450 1455	
gct tcc gga acc cgg gtt ccc aga cac aga ccc ctc tca ggt tta cag	4533
Ala Ser Gly Thr Arg Val Pro Arg His Arg Pro Leu Ser Gly Leu Gln	
1460 1465 1470 1475	
ccc cgg cct gcc gcc tgc ccc ggc cca gcc ctc aag cat ccc acc ctg	4581
Pro Arg Pro Ala Ala Cys Pro Gly Pro Ala Leu Lys His Pro Thr Leu	
1480 1485 1490	
cgc act ggt cag cca gcc cac ggt cca gtt cat cct tca ggg gag cct	4629
Arg Thr Gly Gln Pro Ala His Gly Pro Val His Pro Ser Gly Glu Pro	
1495 1500 1505	
gcc gct agt ggg ctg tgg ggc agc aca gac cct ggc ccc agt gcc cgc	4677
Ala Ala Ser Gly Leu Trp Gly Ser Thr Asp Pro Gly Pro Ser Ala Arg	
1510 1515 1520	
tgc cct gac ccc agc ctc aga gcc agc cag tca agc cac tgc agc cag	4725
Cys Pro Asp Pro Ser Leu Arg Ala Ser Gln Ser Ser His Cys Ser Gln	
1525 1530 1535	
caa ctc gga gga gaa gac ccc ggc ccc cag gct agc tgc gga gaa aac	4773
Gln Leu Gly Gly Glu Asp Pro Gly Pro Gln Ala Ser Cys Gly Glu Asn	
1540 1545 1550 1555	
caa gaa gga gga gta cat gaa gaa gct gca cat gca gga gcg tgc tgt	4821
Gln Glu Gly Gly Val His Glu Glu Ala Ala His Ala Gly Ala Cys Cys	
1560 1565 1570	
gga gga ggt gaa gct ggc cat caa gcc ctt cta cca gaa gag gga ggt	4869
Gly Gly Gly Glu Ala Gly His Gln Ala Leu Leu Pro Glu Glu Gly Gly	
1575 1580 1585	
gac caa gga gga gta caa gga cat cct gcg caa ggc cgt gca gaa gat	4917
Asp Gln Gly Gly Val Gln Gly His Pro Ala Gln Gly Arg Ala Glu Asp	
1590 1595 1600	
ctg cca cag caa gag tgg aga gat caa ccc cgt gaa ggt ggc caa cct	4965
Leu Pro Gln Gln Glu Trp Arg Asp Gln Pro Arg Gly Gly Gln Pro	
1605 1610 1615	
ggt gaa ggc gta cgt gga caa gta cag gca cat gcg cag gca caa gaa	5013
Gly Glu Gly Val Arg Gly Gln Val Gln Ala His Ala Gln Ala Gln Glu	
1620 1625 1630 1635	
acc aga ggc cgg gga gga gcc gcc cac gca ggc ggc cga ggg ctg agg	5061
Thr Arg Gly Arg Gly Ala Ala His Ala Gly Gly Arg Gly Leu Arg	
1640 1645 1650	

```

cca ggc aat cac ggg cta tgc ccg ggg agc tgt cgg gag tgg cgg gaa      5109
Pro Gly Asn His Gly Leu Cys Pro Gly Ser Cys Arg Glu Trp Arg Glu
      1655      1660      1665

tcg ggg cca tgc ccg ggg agc tgt cgg gag tgg cgg gaa tcg ggg cca      5157
Ser Gly Pro Cys Pro Gly Ser Cys Arg Glu Trp Arg Glu Ser Gly Pro
      1670      1675      1680

tgc ccg ggg agc tgt cgg gag tgg cgg gaa atg ggg ggc atc acc atg      5205
Cys Pro Gly Ser Cys Arg Glu Trp Arg Glu Met Gly Gly Ile Thr Met
      1685      1690      1695

cct gcc gtc ggg ttc ctg cgc tga cacctgggtct gtgcacctgt gttgctcaca      5259
Pro Ala Val Gly Phe Leu Arg *
1700      1705

gttgaaaact ggacactttt gtatgtatat tatagagaca ctgtttccat tctaatttat      5319

caaaaatgga ttatcttttag aaaaaaaaaa aaa      5352

```

```

<210> 949
<211> 2319
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> CDS
<222> (227) .. (1162)

```

```

<220>
<221> misc_feature
<222> (1) ... (2319)
<223> n = a,t,c or g

```

```

<400> 949
ggggttgaan gaggataccc ctttgacatc tcggcctatt taggtgacac tatagaacaa      60

gtttgtacaa aaaagcaggc tggtagccgt ccggaattcc cgggatatcg tcgacccacg      120

cgtcgcgcgc cccgcgctgg gaatttgagg cgccctccgc cggggcagcc gagctgaacc      180

ggtctcttcc tcggaaaggc agggccgagg ggctgcggg gcagcc atg gag gcg      235
Met Glu Ala
1

acg cgg agg cgg cag cac ctg gga gcg acg ggc ggc oca ggc gcg cag      283
Thr Arg Arg Arg Gln His Leu Gly Ala Thr Gly Gly Pro Gly Ala Gln
5 10 15

ctg ggc gcc tcc ttc ctg cag gcc agg cat ggc tct gtg agc gct gat      331
Leu Gly Ala Ser Phe Leu Gln Ala Arg His Gly Ser Val Ser Ala Asp
20 25 30 35

gag gct gcc cgc acg gct ccc ttc cac ctc gac ctc tgg ttc tac ttc      379
Glu Ala Ala Arg Thr Ala Pro Phe His Leu Asp Leu Trp Phe Tyr Phe
40 45 50

aca ctg cag aac tgg gtt ctg gac ttt ggg cgt ccc att gcc atg ctg      427
Thr Leu Gln Asn Trp Val Leu Asp Phe Gly Arg Pro Ile Ala Met Leu
55 60 65

```


gta ttc cct ctc gag tgg ttt cca ctc aac aag ccc agt gtt ggg gac	475
Val Phe Pro Leu Glu Trp Phe Pro Leu Asn Lys Pro Ser Val Gly Asp	
70 75 80	
tac ttc cac atg gcc tac aac gtc atc acg ccc ttt ctc ttg ctc aag	523
Tyr Phe His Met Ala Tyr Asn Val Ile Thr Pro Phe Leu Leu Leu Lys	
85 90 95	
ctc atc gag cgg tcc ccc cgc acc ctg cca cgc tcc atc acg tac gtg	571
Leu Ile Glu Arg Ser Pro Arg Thr Leu Pro Arg Ser Ile Thr Tyr Val	
100 105 110 115	
agc atc atc atc ttc atc atg ggt gcc agc atc cac ctg gtg ggt gac	619
Ser Ile Ile Ile Phe Ile Met Gly Ala Ser Ile His Leu Val Gly Asp	
120 125 130	
tct gtc aac cac cgc ctg ctc ttc agt ggc tac cag cac cac ctg tct	667
Ser Val Asn His Arg Leu Leu Phe Ser Gly Tyr Gln His His Leu Ser	
135 140 145	
gtc cgt gag aac ccc atc atc aag aat ctc aag ccg gag acg ctg atc	715
Val Arg Glu Asn Pro Ile Ile Lys Asn Leu Lys Pro Glu Thr Leu Ile	
150 155 160	
gac tcc ttt gag ctg ctc tac tat tat gat gag tac ctg ggt cac tgc	763
Asp Ser Phe Glu Leu Leu Tyr Tyr Tyr Asp Glu Tyr Leu Gly His Cys	
165 170 175	
atg tgg tac atc ccc ttc ttc ctc atc ctc ttc atg tac ttc agc ggc	811
Met Trp Tyr Ile Pro Phe Phe Leu Ile Leu Phe Met Tyr Phe Ser Gly	
180 185 190 195	
tgc ttt act gcc tct aaa gct gag agc ttg att cca ggg cct gcc ctg	859
Cys Phe Thr Ala Ser Lys Ala Glu Ser Leu Ile Pro Gly Pro Ala Leu	
200 205 210	
ctc ctg gtg gca ccc agt ggc ctg tac tac tgg tac ctg gtc acc gag	907
Leu Leu Val Ala Pro Ser Gly Leu Tyr Tyr Trp Tyr Leu Val Thr Glu	
215 220 225	
ggc cag atc ttc atc ctc ttc atc ttc acc ttc ttc gcc atg ctg gcc	955
Gly Gln Ile Phe Ile Leu Phe Ile Phe Thr Phe Phe Ala Met Leu Ala	
230 235 240	
ctc gtc ctg cac cag aag cgc aag cgc ctc ttc ctg gac agc aac ggc	1003
Leu Val Leu His Gln Lys Arg Lys Arg Leu Phe Leu Asp Ser Asn Gly	
245 250 255	
ctc ttc ctc ttc tcc tcc ttc gca ctg acc ctc ttg ctt gtg gcg ctc	1051
Leu Phe Leu Phe Ser Ser Phe Ala Leu Thr Leu Leu Leu Val Ala Leu	
260 265 270 275	
tgg gtc gcc tgg ctg tgg aat gac cct gtt ctc agg aag aag tac ccg	1099
Trp Val Ala Trp Leu Trp Asn Asp Pro Val Leu Arg Lys Lys Tyr Pro	
280 285 290	
ggg gtc atc tac gtc cct gag ccc tgg gct ttc tac acc ctt cac gtc	1147
Gly Val Ile Tyr Val Pro Glu Pro Trp Ala Phe Tyr Thr Leu His Val	
295 300 305	
agc agt cgg cac tga gtccctggca ccaggctctg gcgctctgct ggggtgggagg	1202
Ser Ser Arg His *	
310	

```

gtgggccatg gagggcatct gaatacagga gtagggggggg tgtgggtgtg taaccagaga 1262
ccgagagcat gagggggtg tgcctcgtgt gcgtggattc gtgtgtgtgt gtgtgtcttg 1322
tatatgtgtg cgcagagtgc atcattttca gactctacta tttccgtcaa gtttctgttt 1382
gatttgatc atctcaggat cggattctgt tttagagtgt ttctgggcca ggatccgggc 1442
ccctgccctc ctctgcacct gaccacactc cctactcagg gctagtctgt tcttcccgga 1502
catcttctgg tagccgtgca ggagagggct ggggtggggca gaggccagga ggggacctgg 1562
tgtgtcacct gcccaccacc tggctcatcc ctccaggccca ccctgacct acattacata 1622
ggttacgtca gcctactgtg gctgttgagc aaagcatttc tcctttctgg gcctcatttg 1682
cactagatgg gcctgtggtc ccaaagtagg tcagtaggtt ggggttgctg acacccttg 1742
gggtgcagctt tgggacagat gagtggctct gtccctgtcac tgcctctcc ctgcctggg 1802
gctatgtgca ctccagacct ctgccaggc tcaggcccat gaggtatgga gacaccctgg 1862
ccccaggag ctggaggcac cgcacctcc cctggcattc cagctttgca ggtgacctc 1922
ctctacccaa agctctgtcc ccctgtccc actccagaag aactgcggca cgtgcttcgg 1982
gcagcctagc cacaggcttt gagcgctgc attcctgggg gctggagggt ggggtgccaa 2042
aggccctgag caaaagccag agctcctctc atcaaagcct ttacaagggtg ctgggcccag 2102
aggctttgcc ttgacagagt gggccagggt ttcaaggagg gaggaacctc ccctaccta 2162
ggaccttcc tgtgggggt ctacagagtc agggacagaa ggaaggagc ccacaggaag 2222
tcacagtggg gccagggat gtgtcagccc ccagccacgg ggacgcggga ttcaagaatg 2282
aagtaaatac agtcacagcc ccaaaaaaaaa aaaaaaa 2319

```

<210> 950
 <211> 1392
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (157) .. (1212)

```

<400> 950
gtacgagggc ggcggcgagg accacaccgg gggcggggcc ggtagtggga gtgcggggcg 60
gcgggtgaca gcgcgggggtt ggcggcgtgg gaccaggggg gcgacagagg cagcagcagc 120
ccgaggcctg aggagaggag accggcggcg gcggca atg ctg gag acc ctt cgc 174
                                         Met Leu Glu Thr Leu Arg
                                         1 5
gag cgg ctg ctg agc gtg cag cag gat ttc acc tcc ggg ctg aag act 222
Glu Arg Leu Leu Ser Val Gln Gln Asp Phe Thr Ser Gly Leu Lys Thr
          10          15          20
tta agt gac aag tca aga gaa gca aaa gtg aaa agc aaa ccc agg act 270

```

Leu	Ser	Asp	Lys	Ser	Arg	Glu	Ala	Lys	Val	Lys	Ser	Lys	Pro	Arg	Thr	
		25					30					35				
gtt	cca	ttt	ttg	cca	aag	tac	tct	gct	gga	tta	gaa	tta	ctt	agc	agg	318
Val	Pro	Phe	Leu	Pro	Lys	Tyr	Ser	Ala	Gly	Leu	Glu	Leu	Leu	Ser	Arg	
		40				45					50					
tat	gag	gat	aca	tgg	gct	gca	ctt	cac	aga	aga	gcc	aaa	gac	tgt	gca	366
Tyr	Glu	Asp	Thr	Trp	Ala	Ala	Leu	His	Arg	Arg	Ala	Lys	Asp	Cys	Ala	
		55			60				65						70	
agt	gct	gga	gag	ctg	gtg	gat	agc	gag	gtg	gtc	atg	ctt	tct	gcg	cac	414
Ser	Ala	Gly	Glu	Leu	Val	Asp	Ser	Glu	Val	Val	Met	Leu	Ser	Ala	His	
				75					80					85		
tgg	gag	aag	aaa	aag	aca	agc	ctc	gtg	gag	ctg	caa	gag	cag	ctc	cag	462
Trp	Glu	Lys	Lys	Lys	Thr	Ser	Leu	Val	Glu	Leu	Gln	Glu	Gln	Leu	Gln	
			90					95					100			
cag	ctc	cca	gct	tta	atc	gca	gac	tta	gaa	tcc	atg	aca	gca	aat	ctg	510
Gln	Leu	Pro	Ala	Leu	Ile	Ala	Asp	Leu	Glu	Ser	Met	Thr	Ala	Asn	Leu	
		105				110						115				
act	cat	tta	gag	gcg	agt	ttt	gag	gag	gta	gag	aac	aac	ctg	ctg	cat	558
Thr	His	Leu	Glu	Ala	Ser	Phe	Glu	Glu	Val	Glu	Asn	Asn	Leu	Leu	His	
		120				125					130					
ctg	gaa	gac	tta	tgt	ggg	cag	tgt	gaa	tta	gaa	aga	tgc	aaa	cat	atg	606
Leu	Glu	Asp	Leu	Cys	Gly	Gln	Cys	Glu	Leu	Glu	Arg	Cys	Lys	His	Met	
		135			140				145					150		
cag	tcc	cag	caa	ctg	gag	aat	tac	aag	aaa	aat	aag	agg	aag	gaa	ctt	654
Gln	Ser	Gln	Gln	Leu	Glu	Asn	Tyr	Lys	Lys	Asn	Lys	Arg	Lys	Glu	Leu	
			155					160						165		
gaa	acc	ttc	aaa	gct	gaa	cta	gat	gca	gag	cac	gcc	cag	aag	gtc	ctg	702
Glu	Thr	Phe	Lys	Ala	Glu	Leu	Asp	Ala	Glu	His	Ala	Gln	Lys	Val	Leu	
			170					175					180			
gaa	atg	gag	cac	acc	cag	caa	atg	aag	ctg	aag	gag	cgg	cag	aag	ttt	750
Glu	Met	Glu	His	Thr	Gln	Gln	Met	Lys	Leu	Lys	Glu	Arg	Gln	Lys	Phe	
		185					190					195				
ttt	gag	gaa	gcc	ttc	cag	cag	gac	atg	gag	cag	tac	ctg	tcc	act	ggc	798
Phe	Glu	Glu	Ala	Phe	Gln	Gln	Asp	Met	Glu	Gln	Tyr	Leu	Ser	Thr	Gly	
		200				205					210					
tac	ctg	cag	att	gca	gag	cgg	cga	gag	ccc	ata	ggc	agc	atg	tca	tcc	846
Tyr	Leu	Gln	Ile	Ala	Glu	Arg	Arg	Glu	Pro	Ile	Gly	Ser	Met	Ser	Ser	
		215				220				225					230	
atg	gaa	gtg	aac	gtg	gac	atg	ctg	gag	cag	atg	gac	ctg	atg	gac	ata	894
Met	Glu	Val	Asn	Val	Asp	Met	Leu	Glu	Gln	Met	Asp	Leu	Met	Asp	Ile	
			235					240						245		
tcg	gac	cag	gag	gcc	ctg	gac	gtc	ttc	ctg	aac	tct	gga	gga	gaa	gag	942
Ser	Asp	Gln	Glu	Ala	Leu	Asp	Val	Phe	Leu	Asn	Ser	Gly	Gly	Glu	Glu	
			250					255					260			
aac	act	gtg	ctg	tcc	ccc	gcc	tta	ggg	cct	gaa	tcc	agt	acc	tgt	cag	990
Asn	Thr	Val	Leu	Ser	Pro	Ala	Leu	Gly	Pro	Glu	Ser	Ser	Thr	Cys	Gln	
		265					270					275				
aat	gag	att	acc	ctc	cag	gtt	cca	aat	ccc	tca	gaa	tta	aga	gcc	aag	1038

Asn	Glu	Ile	Thr	Leu	Gln	Val	Pro	Asn	Pro	Ser	Glu	Leu	Arg	Ala	Lys	
280						285					290					
cca	cct	tct	tct	tcc	tcc	acc	tgc	acc	gac	tgc	gcc	acc	cgg	gac	atc	1086
Pro	Pro	Ser	Ser	Ser	Ser	Thr	Cys	Thr	Asp	Ser	Ala	Thr	Arg	Asp	Ile	
295					300					305					310	
agt	gag	ggt	ggg	gag	tcc	ccc	gtt	gtt	cag	tcc	gat	gag	gag	gaa	gtt	1134
Ser	Glu	Gly	Gly	Glu	Ser	Pro	Val	Val	Gln	Ser	Asp	Glu	Glu	Glu	Val	
				315					320					325		
cag	gtg	gac	act	gcc	ctg	gcc	aca	tca	cac	act	gac	aga	gag	gcc	act	1182
Gln	Val	Asp	Thr	Ala	Leu	Ala	Thr	Ser	His	Thr	Asp	Arg	Glu	Ala	Thr	
			330						335					340		
ccg	gat	ggt	ggt	gag	gac	agc	gac	tct	taa	a	ttgggacatg	ggcgttgtct				1233
Pro	Asp	Gly	Gly	Glu	Asp	Ser	Asp	Ser	*							
		345					350									
ggccacactg	gaatccagtt	ttggctgtat	gcggaattcc	acctggaaag	ccaggttgtt											1293
ttatagaggt	tcttgatttt	tacataattg	ccaataatgt	gtgagaaact	taaagaacag											1353
ctaacaataa	agtgtgagga	cggtaaaaaa	aaaaaaaaa													1392

<210> 951
 <211> 3423
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (845) .. (2593)

<400> 951	
cgaatatattc	acaaaaacca
gggtaaatgc	catcagtcac
aatggaaatt	gtccccctgaa
	60
gctacagata	aactttaagt
aagtttgacg	ctttgggtgg
gacacaaatg	gcatgtgctg
	120
acatcctcat	actttattag
ggaacatatt	ctgctctggg
ctgaagccaa	ctcatttcat
	180
catcatcatt	gttgtcataa
tcacgtcgt	catcatcata
gcaaccattt	cctgaacgtt
	240
tattgtgttg	catacactgg
tccagaacct	taaggcagat
gatctatttc	atcttctgaa
	300
gaaatctgag	acctgagatg
ctcccatgag	ttttgaatat
gctctgctcc	ttacagcaaa
	360
gacaccattt	ttaaaagtac
cattcttttg	actttgctgt
tcccaaggct	tctgtgatat
	420
tccggccccct	ccgtttaaaa
gccatcagat	ttgagagcaa
taagtcttca	aaaccgggaa
	480
tttacattgt	ttttcagctg
accgacttcc	aggaaaagga
ctcaaccgca	tctacccaaa
	540
taccgtggca	ctgcttgccg
tctttgccac	cggatactcc
ccttccaatg	agactttctg
	600
attgtgtcta	ccaactctcc
tattaggaaa	cccgtgggtt
gcatgcagct	attctgttgt
	660
attctcattc	tcaactctcc
tcccttctct	cactctcact
cttgcctggag	gcgagccact
	720
accattctgc	tgagaaggaa
aagcccgcaa	ctactttaag
agattaagac	aatatgcgca
	780

atcctcgctt ttcctagcaa tcactatttta aatctggcaa gaactgacaa cagtctttgc 840

aaga atg gaa tcc gta aaa caa agg att ttg gcc cca gga aaa gag ggg 889
Met Glu Ser Val Lys Gln Arg Ile Leu Ala Pro Gly Lys Glu Gly
1 5 10 15

cta aag aat ttt gct gga aaa tca ctc ggc cag atc tac agg gtg ctg 937
Leu Lys Asn Phe Ala Gly Lys Ser Leu Gly Gln Ile Tyr Arg Val Leu
20 25 30

gag aag aag caa gac acc ggg gag aca atc gag ctg acg gag gat ggg 985
Glu Lys Lys Gln Asp Thr Gly Glu Thr Ile Glu Leu Thr Glu Asp Gly
35 40 45

aag ccc cta gag gtg ccc gag agg aag gcg ccg ctg tgc gac tgc acg 1033
Lys Pro Leu Glu Val Pro Glu Arg Lys Ala Pro Leu Cys Asp Cys Thr
50 55 60

tgc ttc ggc ctg ccc cgc cgc tac att atc gcc atc atg agc ggc ctg 1081
Cys Phe Gly Leu Pro Arg Arg Tyr Ile Ile Ala Ile Met Ser Gly Leu
65 70 75

ggc ttc tgc atc tcc ttc ggt atc cgc tgc aac ctg ggc gtg gcc att 1129
Gly Phe Cys Ile Ser Phe Gly Ile Arg Cys Asn Leu Gly Val Ala Ile
80 85 90 95

gtg gac atg gtc aac aac agc acc atc cac cgc ggg ggc aag gtc atc 1177
Val Asp Met Val Asn Asn Ser Thr Ile His Arg Gly Gly Lys Val Ile
100 105 110

aag gag aaa gcc aaa ttc aac tgg gac ccg gaa acc gtg ggg atg atc 1225
Lys Glu Lys Ala Lys Phe Asn Trp Asp Pro Glu Thr Val Gly Met Ile
115 120 125

cac ggt tcc ttc ttt tgg ggc tac atc atc act cag att ccg gga ggc 1273
His Gly Ser Phe Phe Trp Gly Tyr Ile Ile Thr Gln Ile Pro Gly Gly
130 135 140

tac atc gcg tct cgg ctg gca gcc gac agg gtt ttc gga gct gcc ata 1321
Tyr Ile Ala Ser Arg Leu Ala Ala Asp Arg Val Phe Gly Ala Ala Ile
145 150 155

ctt ctt acc tct acc cta aat atg cta att cca tca gca gcc aga gtg 1369
Leu Leu Thr Ser Thr Leu Asn Met Leu Ile Pro Ser Ala Ala Arg Val
160 165 170 175

cat tat gga tgt gtc atc ttt gtc aga ata ctg cag gga ctt gtt gag 1417
His Tyr Gly Cys Val Ile Phe Val Arg Ile Leu Gln Gly Leu Val Glu
180 185 190

ggt gtg acc tac cca gca tgt cat ggg ata tgg agc aaa tgg gcc cca 1465
Gly Val Thr Tyr Pro Ala Cys His Gly Ile Trp Ser Lys Trp Ala Pro
195 200 205

cct cta gag agg agt aga ctg gca acc acc tcc ttt tgt ggt tcc tat 1513
Pro Leu Glu Arg Ser Arg Leu Ala Thr Ser Phe Cys Gly Ser Tyr
210 215 220

gcc gga gct gtg att gca atg cct tta gct ggc att ctt gtg cag tac 1561
Ala Gly Ala Val Ile Ala Met Pro Leu Ala Gly Ile Leu Val Gln Tyr
225 230 235

act ggc tgg tct tca gtg ttt tat gtc tac gga agc ttt gga atg gtc 1609
Thr Gly Trp Ser Ser Val Phe Tyr Val Tyr Gly Ser Phe Gly Met Val

240	245	250	255	
tgg tac atg ttt tgg ctt ttg gtg tct tat gaa agt cct gca aag cat				1657
Trp Tyr Met Phe Trp Leu Leu Val Ser Tyr Glu Ser Pro Ala Lys His	260	265	270	
cct act att aca gat gaa gaa cgt agg tac aca gaa gaa agc att gga				1705
Pro Thr Ile Thr Asp Glu Glu Arg Arg Tyr Thr Glu Glu Ser Ile Gly	275	280	285	
gag agt gca aat ctt tta ggt gca atg gaa aaa ttc aag act cca tgg				1753
Glu Ser Ala Asn Leu Leu Gly Ala Met Glu Lys Phe Lys Thr Pro Trp	290	295	300	
agg aag ttt ttt aca tcc atg cca gtc tat gca ata att gtt gca aac				1801
Arg Lys Phe Phe Thr Ser Met Pro Val Tyr Ala Ile Ile Val Ala Asn	305	310	315	
ttc tgc aga agc tgg act ttt tat tta ttg ctt att agt cag cca gca				1849
Phe Cys Arg Ser Trp Thr Phe Tyr Leu Leu Leu Ile Ser Gln Pro Ala	320	325	330	335
tat ttt gag gaa gtc ttt gga ttt gaa att agc aag gtt ggt atg cta				1897
Tyr Phe Glu Glu Val Phe Gly Phe Glu Ile Ser Lys Val Gly Met Leu	340	345	350	
tct gct gtg cca cac tta gta atg aca att att gtg cct att ggg gga				1945
Ser Ala Val Pro His Leu Val Met Thr Ile Ile Val Pro Ile Gly Gly	355	360	365	
caa att gca gat ttt cta aga agc aag cag att ctt tca act acg aca				1993
Gln Ile Ala Asp Phe Leu Arg Ser Lys Gln Ile Leu Ser Thr Thr Thr	370	375	380	
gtg aga aag atc atg aat tgt ggt ggt ttt ggc atg gaa gcc aca ctg				2041
Val Arg Lys Ile Met Asn Cys Gly Gly Phe Gly Met Glu Ala Thr Leu	385	390	395	
ctc ctg gtc gtt ggc tat tct cat act aga ggg gta gca atc tca ttc				2089
Leu Leu Val Val Gly Tyr Ser His Thr Arg Gly Val Ala Ile Ser Phe	400	405	410	415
ttg gta ctt gca gtg gga ttc agt gga ttt gct ata tct ggt ttc aat				2137
Leu Val Leu Ala Val Gly Phe Ser Gly Phe Ala Ile Ser Gly Phe Asn	420	425	430	
gtt aac cac ttg gat atc gct cca aga tat gcc agt atc tta atg ggc				2185
Val Asn His Leu Asp Ile Ala Pro Arg Tyr Ala Ser Ile Leu Met Gly	435	440	445	
att tcg aat ggt gtt ggc aca ttg tca gga atg gtt tgt cct atc att				2233
Ile Ser Asn Gly Val Gly Thr Leu Ser Gly Met Val Cys Pro Ile Ile	450	455	460	
gtt ggt gca atg aca aag aat aag tca cgt gaa gag tgg cag tat gtc				2281
Val Gly Ala Met Thr Lys Asn Lys Ser Arg Glu Glu Trp Gln Tyr Val	465	470	475	
ttc ctg atc gct gcc cta gtc cac tat ggt gga gtt ata ttt tat gca				2329
Phe Leu Ile Ala Ala Leu Val His Tyr Gly Gly Val Ile Phe Tyr Ala	480	485	490	495
ata ttt gcc tca gga gag aaa caa ccc tgg gca gac ccg gag gaa aca				2377
Ile Phe Ala Ser Gly Glu Lys Gln Pro Trp Ala Asp Pro Glu Glu Thr				

500	505	510	
agt gaa gaa aaa tgt gga ttt att cat gaa gat gaa ctc gat gaa gaa			2425
Ser Glu Glu Lys Cys Gly Phe Ile His Glu Asp Glu Leu Asp Glu Glu			
515	520	525	
aca ggg gac att act caa aat tat ata aat tat ggt acc acc aag tct			2473
Thr Gly Asp Ile Thr Gln Asn Tyr Ile Asn Tyr Gly Thr Thr Lys Ser			
530	535	540	
tat ggt gcc aca aca cag gcc aat gga ggt tgg cct agt ggt tgg gaa			2521
Tyr Gly Ala Thr Thr Gln Ala Asn Gly Gly Trp Pro Ser Gly Trp Glu			
545	550	555	
aag aaa gag gaa ttt gta caa gga gaa gta caa gac tca cat agc tat			2569
Lys Lys Glu Glu Phe Val Gln Gly Glu Val Gln Asp Ser His Ser Tyr			
560	565	570	575
aag gac cga gtt gat tat tca taa caaaactaat tactggattt attttttagtg			2623
Lys Asp Arg Val Asp Tyr Ser *			
580			
tttgtgatta aattcattgt gattgcacaa aaattttaaa aacacgtgat gttaaacttgc			2683
aagcatatca accaggcaag tcttgctgta aaaatgaaaa caaaacaaac ccatgaggtt			2743
accatcaagt gcaatctgta aaattgtgaa gttccatcat ttccattcaa gtcattccatt			2803
cttgcatattg tgacttaaag gttgactggt caaaattgta gaaacaagta gttacccatt			2863
ggattcatat gagctaaaac tcatcactat ttactaaagc acaacatctc atcctacaaa			2923
agttaagaag ccaaagctac ttgatcatgc aaaatgcact tatatatattg ttacactgta			2983
ttgcaagata gcacacagaa gttggctgcg tcaagtagag gcgacattta ttaagtgaaa			3043
atcatgggag ttgggatatc tctcaattaa agaaatacat tgtgaactat cagctaccaa			3103
gttgactga ataactatta gaattgcata atgtgagata ttttgttagt cctcaaaagg			3163
aatatcttgc agtgttttct atgaaatgct tgggcacaaa cacttatttc tgtgaaagag			3223
aacatgtaag ttgaggggta tgcttcatgt tcttccatcc atttacctaa tagtatgaaa			3283
cagttcacat ttcaataaaa tcaaactttt catgtagcgt atcacataac ttttttgcaa			3343
aaaatataaa aagaaataaa cttcaatgta ttttttatta caactttgta ctggttgtaa			3403
cttgcattag aaaaaaaaaa			3423

<210> 952
 <211> 1492
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (223) .. (1212)

<400> 952
 aaggatcctt aattaaatta atcccccccc cccccccga ccaactccagc tgggactgct 60

aggaaggttg	cggggtccacc	cggccgagcc	gaacgagggg	aatggtcctc	acccggccac	120
tcgccggttg	aaaagggggcc	gccctggcag	ggaagcggcc	gccgcggcgc	ggtgcagcgc	180
agcggcgaga	aggagtgcgt	tatcgtcttg	cgctactgct	ga	atg tcc gtc ccg	234
					Met Ser Val Pro	
					1	
gag gag gag	gag agg ctt	ttg ccg ctg	acc cag aga	tgg ccc cga	gcg	282
Glu Glu Glu	Glu Arg Leu	Leu Pro Leu	Thr Gln Arg	Trp Pro Arg	Ala	
5	10		15		20	
agc aaa ttc	cta ctg tcc	ggc tgc gcg	gct acc gtg	gcc gag cta	gca	330
Ser Lys Phe	Leu Leu Ser	Gly Cys Ala	Ala Thr Val	Ala Glu Leu	Ala	
	25		30		35	
acc ttt ccc	ctg gat ctc	aca aaa act	cga ctc caa	atg caa gga	gaa	378
Thr Phe Pro	Leu Asp Leu	Thr Lys Thr	Arg Leu Gln	Met Gln Gly	Glu	
	40		45		50	
gca gct ctt	gct cgg ttg	gga gac ggt	gca aga gaa	tct gcc ccc	tat	426
Ala Ala Leu	Ala Arg Leu	Gly Asp Gly	Ala Arg Glu	Ser Ala Pro	Tyr	
	55		60		65	
agg gga atg	gtg cgc aca	gcc cta ggg	atc att gaa	gag gaa ggc	ttt	474
Arg Gly Met	Val Arg Thr	Ala Leu Gly	Ile Ile Glu	Glu Glu Gly	Phe	
	70		75		80	
cta aag ctt	tgg caa gga	gtg aca ccc	gcc att tac	aga cac gta	gtg	522
Leu Lys Leu	Trp Gln Gly	Val Thr Pro	Ala Ile Tyr	Arg His Val	Val	
	85		90		95	
tat tct gga	ggt cga atg	gtc aca tat	gaa cat ctc	cga gag gtt	gtg	570
Tyr Ser Gly	Gly Arg Met	Val Thr Tyr	Glu His Leu	Arg Glu Val	Val	
	105		110		115	
ttt ggc aaa	agt gaa gat	gag cat tat	ccc ctt tgg	aaa tca gtc	att	618
Phe Gly Lys	Ser Glu Asp	Glu His Tyr	Pro Leu Trp	Lys Ser Val	Ile	
	120		125		130	
gga ggg atg	atg gct ggt	gtt att ggc	cag ttt tta	gcc aat cca	act	666
Gly Gly Met	Met Ala Gly	Val Ile Gly	Gln Phe Leu	Ala Asn Pro	Thr	
	135		140		145	
gac cta gtg	aag gtt cag	atg caa atg	gaa gga aaa	aga aaa ctg	gaa	714
Asp Leu Val	Lys Val Gln	Met Gln Met	Glu Gly Lys	Arg Lys Leu	Glu	
	150		155		160	
gga aaa cca	ttg cga ttt	cgt ggt gta	cat cat gca	ttt gca aaa	atc	762
Gly Lys Pro	Leu Arg Phe	Arg Gly Val	His His Ala	Phe Ala Lys	Ile	
	165		170		175	
tta gct gaa	gga gga ata	cga ggg ctt	tgg gca ggc	tgg gta ccc	aat	810
Leu Ala Glu	Gly Ile Arg	Gly Leu Trp	Ala Gly Trp	Val Pro Asn		
	185		190		195	
ata caa aga	gca gca ctg	gtg aat atg	gga gat tta	acc act tat	gat	858
Ile Gln Arg	Ala Ala Leu	Val Asn Met	Gly Asp Leu	Thr Thr Tyr	Asp	
	200		205		210	
aca gtg aaa	cac tac ttg	gta ttg aat	aca cca ctt	gag gac aat	atc	906
Thr Val Lys	His Tyr Leu	Val Leu Asn	Thr Pro Leu	Glu Asp Asn	Ile	
	215		220		225	


```

atg act cac ggt tta tca agt tta tgt tct gga ctg gta gct tct att      954
Met Thr His Gly Leu Ser Ser Leu Cys Ser Gly Leu Val Ala Ser Ile
    230                      235                      240

ctg gga aca cca gcc gat gtc atc aaa agc aga ata atg aat caa cca      1002
Leu Gly Thr Pro Ala Asp Val Ile Lys Ser Arg Ile Met Asn Gln Pro
245                      250                      255                      260

cga gat aaa caa gga agg gga ctt ttg tat aaa tca tcg act gac tgc      1050
Arg Asp Lys Gln Gly Arg Gly Leu Leu Tyr Lys Ser Ser Thr Asp Cys
    265                      270                      275

ttg att cag gct gtt caa ggt gaa gga ttc atg agt cta tat aaa ggc      1098
Leu Ile Gln Ala Val Gln Gly Glu Gly Phe Met Ser Leu Tyr Lys Gly
    280                      285                      290

ttt tta cca tct tgg ctg aga atg gta aag tta ggt tta ctt cct ttg      1146
Phe Leu Pro Ser Trp Leu Arg Met Val Lys Leu Gly Leu Leu Pro Leu
    295                      300                      305

ttt ttt ttc ttt gta ctt aaa tta ctt tta att tat aag cat ttt ccc      1194
Phe Phe Phe Phe Val Leu Lys Leu Leu Leu Ile Tyr Lys His Phe Pro
    310                      315                      320

ttt tct ctt ctg gtt tga agcatg gccctgcccc ccaaataag gtcctttctt      1248
Phe Ser Leu Leu Val *
    325                      330

tcttttttttaa atctttctttt atttcctttc actttctctc agagttatct tgccttctgt      1308

ggtagagtaa ggtaaaataa gttacatcca ttgacgaata agttgatagt cttgttataa      1368

agccagtaaa tagattttct gtaatgtaaa attttttagta tttcatttag tcatatttta      1428

atacaatatatt ttagaatata tatacagatt ttacactaga gacctctcct acaaaaaaaaa      1488

aaaa                                                                1492

```

<210> 953
 <211> 4250
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (139)..(1626)

```

<400> 953
gagttgatat cttcccatcc acccgccgct tctttcctcc atctagcgat ttttattttt      60

taagtgtctc ttcctttttc tttcttttct tttttatttt ttatatatat tttttggcat      120

tgctttgcag atgttggg  atg aga gtc gga gcc gaa tac caa gct cgg atc      171
                Met Arg Val Gly Ala Glu Tyr Gln Ala Arg Ile
                  1                      5                      10

cct gaa ttt gat cca ggt gct aca aag tac aca gat aaa gac aat gga      219
Pro Glu Phe Asp Pro Gly Ala Thr Lys Tyr Thr Asp Lys Asp Asn Gly
    15                      20                      25

```

ggg atg ctt gta tgg tct cca tat cac agt atc cca gat gcc aaa ttg	267
Gly Met Leu Val Trp Ser Pro Tyr His Ser Ile Pro Asp Ala Lys Leu	
30 35 40	
gat gaa tac att gca att gca aag gaa aag cat ggc tac aat gtg gaa	315
Asp Glu Tyr Ile Ala Ile Ala Lys Glu Lys His Gly Tyr Asn Val Glu	
45 50 55	
cag gca ctt ggc atg ttg ttc tgg cat aaa cat aac att gag aag tcc	363
Gln Ala Leu Gly Met Leu Phe Trp His Lys His Asn Ile Glu Lys Ser	
60 65 70 75	
ctt gct gat ctc cct aat ttc act ccc ttt ccg gat gag tgg aca gtg	411
Leu Ala Asp Leu Pro Asn Phe Thr Pro Phe Pro Asp Glu Trp Thr Val	
80 85 90	
gaa gat aaa gtc cta ttt gaa caa gcc ttt agt ttt cat gga aag agc	459
Glu Asp Lys Val Leu Phe Glu Gln Ala Phe Ser Phe His Gly Lys Ser	
95 100 105	
ttt cac agg att cag caa atg ctt cca gat aag aca att gca agc ctt	507
Phe His Arg Ile Gln Gln Met Leu Pro Asp Lys Thr Ile Ala Ser Leu	
110 115 120	
gta aaa tat tac tat tct tgg aaa aaa act cgc tct agg aca agt ttg	555
Val Lys Tyr Tyr Tyr Ser Trp Lys Lys Thr Arg Ser Arg Thr Ser Leu	
125 130 135	
atg gat cgc cag gct cgt aaa cta gct aat aga cat aat cag ggt gac	603
Met Asp Arg Gln Ala Arg Lys Leu Ala Asn Arg His Asn Gln Gly Asp	
140 145 150 155	
agt gat gat gat gta gaa gaa aca cat cca atg gat ggg aat gat agt	651
Ser Asp Asp Asp Val Glu Glu Thr His Pro Met Asp Gly Asn Asp Ser	
160 165 170	
gat tat gat ccc aaa aaa gaa gcc aaa aaa gag ggt aat act gaa caa	699
Asp Tyr Asp Pro Lys Lys Glu Ala Lys Lys Glu Gly Asn Thr Glu Gln	
175 180 185	
cct gtc caa act agc aag att gga ctt gga aga aga gag tat cag agt	747
Pro Val Gln Thr Ser Lys Ile Gly Leu Gly Arg Arg Glu Tyr Gln Ser	
190 195 200	
tta caa cat cgc cat cat tct cag cgt tct aag tgc cgt cca cct aag	795
Leu Gln His Arg His His Ser Gln Arg Ser Lys Cys Arg Pro Pro Lys	
205 210 215	
ggc atg tat tta acc cag gaa gat gtg gta gca gtt tcc tgt agt ccc	843
Gly Met Tyr Leu Thr Gln Glu Asp Val Val Ala Val Ser Cys Ser Pro	
220 225 230 235	
aat gca gcc aac acc atc ctg agg caa ctg gac atg gag ttg atc tct	891
Asn Ala Ala Asn Thr Ile Leu Arg Gln Leu Asp Met Glu Leu Ile Ser	
240 245 250	
cta aaa cgt cag gtt cag aat gct aag caa gta aac agt gca ctt aaa	939
Leu Lys Arg Gln Val Gln Asn Ala Lys Gln Val Asn Ser Ala Leu Lys	
255 260 265	
cag aaa atg gaa ggt gga att gaa gaa ttc aaa cct cct gag tca aat	987
Gln Lys Met Glu Gly Gly Ile Glu Glu Phe Lys Pro Pro Glu Ser Asn	
270 275 280	

cag aaa att aat gcc cgt tgg acc aca gag gag cag ctt cta gca gtg	1035
Gln Lys Ile Asn Ala Arg Trp Thr Thr Glu Glu Gln Leu Leu Ala Val	
285 290 295	
caa ggt gtc cgc aaa tat ggt aaa gat ttt caa gct att gca gat gta	1083
Gln Gly Val Arg Lys Tyr Gly Lys Asp Phe Gln Ala Ile Ala Asp Val	
300 305 310 315	
att ggc aac aag act gtt ggc caa gtg aag aac ttc ttt gta aac tac	1131
Ile Gly Asn Lys Thr Val Gly Gln Val Lys Asn Phe Phe Val Asn Tyr	
320 325 330	
agg cgt cgg ttt aac tta gag gag gta ttg cag gag tgg gaa gca gaa	1179
Arg Arg Arg Phe Asn Leu Glu Glu Val Leu Gln Glu Trp Glu Ala Glu	
335 340 345	
caa gga acc cag gct tct aat ggt gat gct tct act tta ggg gag gag	1227
Gln Gly Thr Gln Ala Ser Asn Gly Asp Ala Ser Thr Leu Gly Glu Glu	
350 355 360	
aca aaa agt gct tct aat gtg cca tca ggg aag agc act gat gaa gaa	1275
Thr Lys Ser Ala Ser Asn Val Pro Ser Gly Lys Ser Thr Asp Glu Glu	
365 370 375	
gag gag gca cag acc cca cag gct cct cgg aca ctg ggt cca tca cct	1323
Glu Glu Ala Gln Thr Pro Gln Ala Pro Arg Thr Leu Gly Pro Ser Pro	
380 385 390 395	
cct gcc cca tca tcc act cca aca cca aca gcc cct att gcc act ctg	1371
Pro Ala Pro Ser Ser Thr Pro Thr Pro Thr Ala Pro Ile Ala Thr Leu	
400 405 410	
aac cag cct cca cca ctt ctt cgt cca aca ctg cct gct gcc ccg gct	1419
Asn Gln Pro Pro Pro Leu Leu Arg Pro Thr Leu Pro Ala Ala Pro Ala	
415 420 425	
ctt cac cgg cag cct cct cca ctc cag cag cag gct cgg ttc atc cag	1467
Leu His Arg Gln Pro Pro Pro Leu Gln Gln Gln Ala Arg Phe Ile Gln	
430 435 440	
ccc cgg cca act tta aat cag cct cca cca cct ctt att cgc cct gct	1515
Pro Arg Pro Thr Leu Asn Gln Pro Pro Pro Pro Leu Ile Arg Pro Ala	
445 450 455	
aat tcc atg cca ccc cgt cta aac cca aga ccg gtg ttg tcc acg gtt	1563
Asn Ser Met Pro Pro Arg Leu Asn Pro Arg Pro Val Leu Ser Thr Val	
460 465 470 475	
ggt ggt caa cag cca cca tca ctt att gga att cag aca gat tca cag	1611
Gly Gly Gln Gln Pro Pro Ser Leu Ile Gly Ile Gln Thr Asp Ser Gln	
480 485 490	
tcc tca ctg cac taa aaattaaatt ggacacagct gcagtaactt ttcaccccat	1666
Ser Ser Leu His *	
495	
cattatacca gtgctcatct gactgatgaa aaagaggaaa gaataatcat ttctagatac	1726
tgaggctgcg aactagttct gtggcagtgg actagcataa gtggatgtct aagaaatttt	1786
tcagttcact agactaaaat gttttacaac aaaaagcctc cagttagcct cctttctaga	1846
gtatatgttc agcaatgtga tctcataaaa ggaaaaacaa aagatttaag tattctatat	1906

accaagtttt tgttttgttt ttactgtatt tattttattg aggttcttta tattcctgcc 1966
tcttcatagt caaggctctt agtacaggaa tattgactta ggaattgtga aaactcctta 2026
agtttcttaa gttaaggatg ttgggctttt ttctttaatt ttttaaaaac cattttccta 2086
tgtaggagt gcaagaatag ccagcatttc cgattttgac atatgttcat tttatgcata 2146
tttaagaaat tatagctgca tatcccttct ttcaaaaaat gttgcttttt tttttaaagg 2206
aattttaata tattccttta aaagaaagca atttaatcaa ttgcaaagca attatataaa 2266
accacaaaga atgtactgaa cctactaacc cttaacata cagtttaggg tcctagcgca 2326
gagtccttgt ttaaagggtca ttgactcatc atctgtcagt aatgagagga ttggaagaat 2386
aattttgcat acaaatgagg acttaatttg ttgaaaaata atctctttaa gttccttgaa 2446
aatggagttg gttttttttg ttctaaatg ctatctgctt ttaactagta gttgcctaca 2506
tctggggact tcagagaaga attatatttt gttagttaag tagacacagt ggttatggaa 2566
gcatttcttt acagtacct ttacgtgttt ggtttctgaa cttaaaattg cctcatact 2626
taataatatg gtctgcattt aatatgaaag gtgttttatt gataaatcta ttgtactatt 2686
tggatacatt tgtgtattcc ttgcagccaa cctgtattcg tgggattggg taggggttaa 2746
atcatcaaca ttatttcata aaataagaat ttgttctgtg ttatctaaag atgtatcagt 2806
atattgtcac agttgtgctg ttaactaaaa atgctgagac ccctttttat agaaaaacaa 2866
aaagacatca agtcttctta attcaaccca taatcattaa gtacttaaca aagaatattt 2926
tacaagtgat agtatttcaa caatgtgtaa ttaatatatt tgatacagtg atttcatatt 2986
ggaatcatta tttgtgcaaa gggacagaca gatcacttag attgctatac tagtggacat 3046
aggctaaatg tttgcacatt cacattctta tcacgtgtag aatacttcac aaaatagtca 3106
acatctaagg ccctaattta tgttttgaaa gatcatgtgt tcccaaagta ttccctattg 3166
ttggctccac agccttaaag tgctatagat ttaaattcat tgattagttt taatttttaa 3226
ttttagactg tgtatttcca taaataacct acgtactggc atatttgaaa ctctttttcc 3286
aggttaggtc cttttctttc tcattgaatc atcttaaata gttcttggcc ctgaatttag 3346
ctgatttaaa attcttaata ttcaagaatt tatacttatt ttttcttaa aagccacagg 3406
ggacagttaa atatcttaaa atatctaaaa cattttttta agcacttaga ttgtcttacg 3466
tatgtgcata ctataccttt acagcgttta ttgtctgtgc tcttgtcagt agaccttcag 3526
tacacagtat gtgggatatg tcagtcaagt tggtcagcac cagcatctgt ccagctgttc 3586
agtatatgtg gattcattaa aaaatctctt ctatcccaga catgggcca ggtgctgtat 3646
ctgagggatg tgctgtaatt tgatttacat gcattagagc acacagtaga aaaacgttag 3706
cttcattagt aatatgacac atgtatatag tgagatgtct ttattgtgtg ctttgcatat 3766
tttgtaaata ttttgacgt cattattttt cttttttgtt taagcagtgt ttggcctgga 3826

```

agagtgatat gcttgctgct taatcaaagg attaaagatt taaagatgtc tatgtcttct 3886
atTTTTatat aatttcagtg tctatgagga atttagtacc tcttcactgt gaaattcgaa 3946
ataatgattt ttataaaagc aaaactagaa atctttttaat gacaattttc attaatttca 4006
gggttatcat ttttgagaaa tctacaccaa agtggttttt taaaattaca taactaaaaa 4066
taaaccacac tgtggataca tcttataaaa ctaatggaaa caatgttttt ctatatgatt 4126
taattctagt gtaatatgga tgaggtaaga gtaagttatg atcaaacttt ttatgttctt 4186
aataagcttg caattgagta aaatagaata taaaataaag gtgaaataat ataaaaaaaa 4246
aaaa 4250

```

<210> 954
 <211> 1770
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (266)..(1135)

```

<400> 954
ccggaattcc cgggtcgacg atttcgtcgc ccgccgtggc gggcgctgcc caccggcgcg 60
agccgagcgg cgtgcagagg ctacaagtgc cgtagctggg gattggggga ctttctccgg 120
gaaccgtgcc gggagagcgc gcggtgctgg agccgcaccg ggtggccgaa gcagaagact 180
ttccggaagc tgctggggga tgtctgacta gctctcatgg agctccacta ccttgctaag 240
aagagcaacc aggcagacct ctgtg atg cca ggg act gga gtt caa gag ggc 292
Met Pro Gly Thr Gly Val Gln Glu Gly
1 5

tgc ctg gtg acc agg cag ata cag cag cca caa gag ctg ctc tct gct 340
Cys Leu Val Thr Arg Gln Ile Gln Gln Pro Gln Glu Leu Leu Ser Ala
10 15 20 25

gtc aga aac agt gtg cat cca ccc caa gag caa ccg aga ctg gaa ggg 388
Val Arg Asn Ser Val His Pro Pro Gln Glu Gln Pro Arg Leu Glu Gly
30 35 40

tct aaa ctt agt tct tct cca gca tcc ccc tcc tcc tct ctg caa aac 436
Ser Lys Leu Ser Ser Ser Pro Ala Ser Pro Ser Ser Ser Leu Gln Asn
45 50 55

agt act ctt cag cca gat gcc ttt cca cca gga ctt ctc cac tca ggg 484
Ser Thr Leu Gln Pro Asp Ala Phe Pro Pro Gly Leu Leu His Ser Gly
60 65 70

aac aac caa ata aca gcg gaa cgg aaa gtc tgt aac tgc tgc agc cag 532
Asn Asn Gln Ile Thr Ala Glu Arg Lys Val Cys Asn Cys Cys Ser Gln
75 80 85

gaa tta gaa act tct ttt acc tat gtg gac aaa aac atc aac ttg gag 580
Glu Leu Glu Thr Ser Phe Thr Tyr Val Asp Lys Asn Ile Asn Leu Glu
90 95 100 105

```

cag cgg aac cgg agc tcg cca tca gca aaa ggg cat aat cac cct ggg Gln Arg Asn Arg Ser Ser Pro Ser Ala Lys Gly His Asn His Pro Gly 110 115 120	628
gag ctt ggc tgg gaa aat cca aat gag tgg tcc caa gag gct gcc ata Glu Leu Gly Trp Glu Asn Pro Asn Glu Trp Ser Gln Glu Ala Ala Ile 125 130 135	676
tct ttg ata tct gaa gag gag gat gat aca agt tca gaa gcc acg tct Ser Leu Ile Ser Glu Glu Glu Asp Asp Thr Ser Ser Glu Ala Thr Ser 140 145 150	724
tca ggg aag tct ata gac tat ggt ttc atc agc gcc atc ttg ttc ttg Ser Gly Lys Ser Ile Asp Tyr Gly Phe Ile Ser Ala Ile Leu Phe Leu 155 160 165	772
gtc act ggg atc ctg ctc gtg atc atc tct tac atc gtc cca cgg gaa Val Thr Gly Ile Leu Leu Val Ile Ile Ser Tyr Ile Val Pro Arg Glu 170 175 180 185	820
gtg act gtg gac ccc aac act gtg gca gcc cgg gag atg gag cgc ctg Val Thr Val Asp Pro Asn Thr Val Ala Ala Arg Glu Met Glu Arg Leu 190 195 200	868
gag aag gag agt gcg agg ctg ggg gct cac ctg gac cgc tgt gtg att Glu Lys Glu Ser Ala Arg Leu Gly Ala His Leu Asp Arg Cys Val Ile 205 210 215	916
gcg ggg ctc tgc ctc ctc acg ctg ggg ggc gtc atc ctg tcc tgc ttg Ala Gly Leu Cys Leu Leu Thr Leu Gly Gly Val Ile Leu Ser Cys Leu 220 225 230	964
tta atg atg tcc atg tgg aag ggg gag ctc tat cgt cga aac aga ttt Leu Met Met Ser Met Trp Lys Gly Glu Leu Tyr Arg Arg Asn Arg Phe 235 240 245	1012
gcc tct tcc aaa gag tct gca aaa ctc tat ggt tct ttc aac ttc agg Ala Ser Ser Lys Glu Ser Ala Lys Leu Tyr Gly Ser Phe Asn Phe Arg 250 255 260 265	1060
atg aaa acc agc acg aat gaa aac act ctg gaa ctg tcc ttg gta gag Met Lys Thr Ser Thr Asn Glu Asn Thr Leu Glu Leu Ser Leu Val Glu 270 275 280	1108
gaa gat gcg ctt gct gta cag agt taa ttctg gttgtgaata tcttgagagt Glu Asp Ala Leu Ala Val Gln Ser *	1160
285 290	
ctgccttggc attttataat atgaaaaaag ttaatttata aaaattcaca gtgcaattta	1220
tttgcttggc aagaaaagtt tatttcacaa accaacagcc agtaagtgtt tttgttctct	1280
atgtgtcttc tatttagaag aaaagccatg taagatgtat aagaaaccac aaccagccac	1340
acctatcctt ctgaagagct gaaggctaataa taatctgtaa tggccaagaa cttctacttc	1400
gatagaaaaa tattttctaata gacccagtct acaaattatt tctttttacac aaatatatga	1460
tgttattctt tggacactag gtggtcctac acacagtagg atcaattgct aatctacttt	1520
gtgaaaaaga actaagcact aatcaataat aaggcttaca tctaattctc aaagggtgctt	1580
atccattttc ttgctaaatt atccttcttg taatttgggt aaacactaaa acatggaatt	1640

tttagtttga atattttgaa gtttgaggat gttgggcttt ccttattgta aaaaatgtta 1700
 tgtttgaaat tattcctggt ttcaaaaatg gtaattaagt cattaggata aactttctaa 1760
 taataaaaaa 1770

<210> 955
 <211> 1877
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (447) .. (1826)

<400> 955
 gctccggaat tcccgggtcg acttcgctgt cgacgatttc gtttttctgt gccactgaca 60
 ccagaaatgc tatttagaag aagttatcag taatcctgac aaaggatgct tcctgcagct 120
 caaatcaggc tggagggtgcc tttatatttt tcattgaatt actgttttgg tgactcgaat 180
 gaatcatcaa ttcatttatt tgtcttcaaa tgtctgacgg cacttaaggt ctaaaaaaga 240
 aggtaagttt aaacagatag tttgatgtta aggtataaat tgaaagtatg taacattttc 300
 cctgtgttca ttagcagctc atatcaagca cccaaaggaa caccttggtat gtttttcctt 360
 aggcccttaa gctattttaa agaatacctc ctaggtgtgg tgcggctctt tacaggaatg 420
 tgtttctgat catctgaatc ttaatc atg tcc aac tgc ctg caa aat ttc ctg 473
 Met Ser Asn Cys Leu Gln Asn Phe Leu
 1 5
 aaa att aca agc act cgt ctt cta tgt tca aga tta tgc caa cag tta 521
 Lys Ile Thr Ser Thr Arg Leu Leu Cys Ser Arg Leu Cys Gln Gln Leu
 10 15 20 25
 aga agt aaa agg aag ttt ttc gga act gtg cca ata tcc aga ttg cat 569
 Arg Ser Lys Arg Lys Phe Phe Gly Thr Val Pro Ile Ser Arg Leu His
 30 35 40
 agg cga gtt gtc att aca ggc att ggc tta gtg act cct ctt ggt gtt 617
 Arg Arg Val Val Ile Thr Gly Ile Gly Leu Val Thr Pro Leu Gly Val
 45 50 55
 gga act cac ctg gtt tgg gat cgt ctt atc gga gga gag agt gga att 665
 Gly Thr His Leu Val Trp Asp Arg Leu Ile Gly Gly Glu Ser Gly Ile
 60 65 70
 gtt tca ctg gtt ggt gaa gag tat aag agt atc cct tgc agt gtt gct 713
 Val Ser Leu Val Gly Glu Glu Tyr Lys Ser Ile Pro Cys Ser Val Ala
 75 80 85
 gct tat gtg cca aga ggt agt gat gaa ggt cag ttc aat gaa caa aac 761
 Ala Tyr Val Pro Arg Gly Ser Asp Glu Gly Gln Phe Asn Glu Gln Asn
 90 95 100 105
 ttt gtg tcc aaa tca gat atc aag tcc atg tct tct ccc acc atc atg 809
 Phe Val Ser Lys Ser Asp Ile Lys Ser Met Ser Ser Pro Thr Ile Met

110	115	120	
gcc att ggg gct gca gaa tta gcc atg aag gat tct ggc tgg cat cct Ala Ile Gly Ala Ala Glu Leu Ala Met Lys Asp Ser Gly Trp His Pro 125 130 135			857
cag tca gaa gct gat caa gtg gct act ggt gtt gca att ggc atg gga Gln Ser Glu Ala Asp Gln Val Ala Thr Gly Val Ala Ile Gly Met Gly 140 145 150			905
atg att cct ctt gaa gtt gtt tct gaa act gct ttg aat ttt cag aca Met Ile Pro Leu Glu Val Val Ser Glu Thr Ala Leu Asn Phe Gln Thr 155 160 165			953
aaa ggt tac aat aaa gtt agc cca ttt ttt gtc cct aag att ctg gtc Lys Gly Tyr Asn Lys Val Ser Pro Phe Phe Val Pro Lys Ile Leu Val 170 175 180 185			1001
aat atg gca gca ggc cag gtc agc att cga tat aaa ctc aag ggc cca Asn Met Ala Ala Gly Gln Val Ser Ile Arg Tyr Lys Leu Lys Gly Pro 190 195 200			1049
aat cat gca gta tcc aca gcc tgt acc aca gga gct cat gct gtg gga Asn His Ala Val Ser Thr Ala Cys Thr Thr Gly Ala His Ala Val Gly 205 210 215			1097
gac tca ttt aga ttt ata gcc cat ggt gat gct gat gtg atg gtg gct Asp Ser Phe Arg Phe Ile Ala His Gly Asp Ala Asp Val Met Val Ala 220 225 230			1145
gga ggt aca gat tct tgt att agc cct tta tct ctt gct ggg ttt tcc Gly Gly Thr Asp Ser Cys Ile Ser Pro Leu Ser Leu Ala Gly Phe Ser 235 240 245			1193
aga gcc cgg gct ctg agc aca aac tca gat ccc aag ttg gca tgt cga Arg Ala Arg Ala Leu Ser Thr Asn Ser Asp Pro Lys Leu Ala Cys Arg 250 255 260 265			1241
cca ttt cat cca aag aga gat ggt ttt gta atg gga gaa ggt gca gct Pro Phe His Pro Lys Arg Asp Gly Phe Val Met Gly Glu Gly Ala Ala 270 275 280			1289
gtg ctg gtg ctg gaa gaa tat gaa cat gct gtt caa aga aga gcc cgg Val Leu Val Leu Glu Glu Tyr Glu His Ala Val Gln Arg Arg Ala Arg 285 290 295			1337
atc tat gca gaa gtt ttg ggc tat gga ctc tca ggt gat gct ggt cac Ile Tyr Ala Glu Val Leu Gly Tyr Gly Leu Ser Gly Asp Ala Gly His 300 305 310			1385
ata act gcc cct gat cct gaa gga gaa ggt gcc tta agg tgt atg gct Ile Thr Ala Pro Asp Pro Glu Gly Glu Gly Ala Leu Arg Cys Met Ala 315 320 325			1433
gct gct tta aaa gat gca ggt gtg cag cct gag gag ata tcc tat atc Ala Ala Leu Lys Asp Ala Gly Val Gln Pro Glu Glu Ile Ser Tyr Ile 330 335 340 345			1481
aat gca cat gct act tcc aca cca ttg gga gat gct gct gaa aac aaa Asn Ala His Ala Thr Ser Thr Pro Leu Gly Asp Ala Ala Glu Asn Lys 350 355 360			1529
gct atc aaa cat ctc ttc aaa gac cat gca tat gcc ctt gca gtt tcc Ala Ile Lys His Leu Phe Lys Asp His Ala Tyr Ala Leu Ala Val Ser			1577

365	370	375	
tca act aag gga gca aca gga cat ctg ctg gga gct gca ggg gca gtc			1625
Ser Thr Lys Gly Ala Thr Gly His Leu Leu Gly Ala Ala Gly Ala Val			
380	385	390	
gag gca gct ttt acc aca tta gct tgt tat tat caa aaa cta cca cct			1673
Glu Ala Ala Phe Thr Thr Leu Ala Cys Tyr Tyr Gln Lys Leu Pro Pro			
395	400	405	
act tta aac ctg gat tgt tct gaa cca gaa ttt gat ctc aac tat gtt			1721
Thr Leu Asn Leu Asp Cys Ser Glu Pro Glu Phe Asp Leu Asn Tyr Val			
410	415	420	425
cca cta aag gca cag gaa tgg aaa act gag aaa aga ttt att ggc ctc			1769
Pro Leu Lys Ala Gln Glu Trp Lys Thr Glu Lys Arg Phe Ile Gly Leu			
430	435	440	
acc aat tcc ttt ggt ttt ggt ggt act aat gca aca ctt tgt att gct			1817
Thr Asn Ser Phe Gly Phe Gly Gly Thr Asn Ala Thr Leu Cys Ile Ala			
445	450	455	
gga ctg tag aacatat aatttgtaat taaatactga tttttaaatg ctaaaaaaaaa			1873
Gly Leu *			
460			
aaaa			1877

<210> 956
 <211> 917
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (274)..(774)

<400> 956	
aatttaggtg acactataga agagctatga cgctcgcatgc acgcgtacgt aagcttggat	60
cctctagagc ggccgctgtc gttgttctga ggcccttgac cctatcctaa gaacctttaa	120
ctcggaactc tggtggggtg gagggccctt cttttcagcc ggtgtcttgc cttccattct	180
cccttcatec tgctcaacac cccgaagctg gtgaaaacag cagagctgcc cccggatcgg	240
aactacgtgc tgggcgcca cctcatggg atc atg tgt aca ggc ttc ctc tgt	294
Met Cys Thr Gly Phe Leu Cys	
1 5	
aat ttc tcc acc gag agc aat ggc ttc tcc cag ctc ttc ccg ggg ctc	342
Asn Phe Ser Thr Glu Ser Asn Gly Phe Ser Gln Leu Phe Pro Gly Leu	
10 15 20	
cgg ccc tgg tta gcc gtg ctg gct ggc ctc ttc tac ctc ccg gtc tat	390
Arg Pro Trp Leu Ala Val Leu Ala Gly Leu Phe Tyr Leu Pro Val Tyr	
25 30 35	
cgc gac tac atc atg tcc ttt gga ctc tgt ccg gtg agc cgc cag agc	438
Arg Asp Tyr Ile Met Ser Phe Gly Leu Cys Pro Val Ser Arg Gln Ser	
40 45 50 55	

ctg gac ttc atc ctg tcc cag ccc cag ctc ggg cag gcc gtg gtc atc 486
 Leu Asp Phe Ile Leu Ser Gln Pro Gln Leu Gly Gln Ala Val Val Ile
 60 65 70
 atg gtg ggg ggt gcg cac gag gcc ctg tat tca gtc ccc ggg gag cac 534
 Met Val Gly Gly Ala His Glu Ala Leu Tyr Ser Val Pro Gly Glu His
 75 80 85
 tgc ctt acg ctc cag aag cgc aaa ggc ttc gtg cgc ctg gcg ctg agg 582
 Cys Leu Thr Leu Gln Lys Arg Lys Gly Phe Val Arg Leu Ala Leu Arg
 90 95 100
 cac ggg gcg tcc ctg gtg ccc gtg tac tcc ttt ggg gag aat gac atc 630
 His Gly Ala Ser Leu Val Pro Val Tyr Ser Phe Gly Glu Asn Asp Ile
 105 110 115
 ttt aga ctt aag gct ttt gcc aca ggc tcc tgg cag cat tgg tgc cag 678
 Phe Arg Leu Lys Ala Phe Ala Thr Gly Ser Trp Gln His Trp Cys Gln
 120 125 130 135
 ctc acc ttc aag aag ctc atg ggc ttc tct cct tgc atc ttc tgg ggc 726
 Leu Thr Phe Lys Lys Leu Met Gly Phe Ser Pro Cys Ile Phe Trp Gly
 140 145 150
 cgc ggt atc ttt gca acc acc acc tgg agc ctg cat ccc ttt gga tga 774
 Arg Gly Ile Phe Ala Thr Thr Thr Trp Ser Leu His Pro Phe Gly *
 155 160 165
 cccatcatcc ctgtgaaagg ccctcaccac cccttcaa at aaatttcgtt gcaggaagg 834
 aaggaccaat tttagtgagt gtcacaccgt ttggaatgac agtggtggag actctcttct 894
 ctggaggggt cgcgacaagc ggg 917

<210> 957
 <211> 912
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (59) .. (850)

<400> 957
 taccggtccg gaattcccg gtcgacgatt tcgtgcggcg gggcggcccg cggcggcc 58
 atg gga gat atc cca gtc gtg ggc ctc agc tcc tgg aag gct tct cca 106
 Met Gly Asp Ile Pro Val Val Gly Leu Ser Ser Trp Lys Ala Ser Pro
 1 5 10 15
 ggg aaa gtg acc gag gca gtg aaa gag gcc att gac gca ggg tac cgg 154
 Gly Lys Val Thr Glu Ala Val Lys Glu Ala Ile Asp Ala Gly Tyr Arg
 20 25 30
 cac ttc gac tgt gct tac ttt tac cac aat gag agg gag gtt gga gca 202
 His Phe Asp Cys Ala Tyr Phe Tyr His Asn Glu Arg Glu Val Gly Ala
 35 40 45
 ggg atc cgt tgc aag atc aag gaa ggc gct gta aga cgg gag gat ctg 250
 Gly Ile Arg Cys Lys Ile Lys Glu Gly Ala Val Arg Arg Glu Asp Leu
 50 55 60

```

ctc att gcc act aag ctg tgg tgc acc tgc cat aag aag tcc ttg gtg      298
Leu Ile Ala Thr Lys Leu Trp Cys Thr Cys His Lys Lys Ser Leu Val
 65                      70                      75                      80

gaa aca gca tgc aga aag agt ctc aag gcc ttg aag ctg aac tat ttg      346
Glu Thr Ala Cys Arg Lys Ser Leu Lys Ala Leu Lys Leu Asn Tyr Leu
 85                      90                      95

gac ctc tac ctc ata cac tgg ccc atg ggt ttc aag cct cct cat cca      394
Asp Leu Tyr Leu Ile His Trp Pro Met Gly Phe Lys Pro Pro His Pro
100                      105                      110

gaa tgg atc atg agc tgc agt gaa ctt tcc ttc tgc ctc tca cat cct      442
Glu Trp Ile Met Ser Cys Ser Glu Leu Ser Phe Cys Leu Ser His Pro
115                      120                      125

cga gtg cag gac ttg cct ctg gac gag agc aac atg gtt att ccc agt      490
Arg Val Gln Asp Leu Pro Leu Asp Glu Ser Asn Met Val Ile Pro Ser
130                      135                      140

gac acg gac ttc ctg gac acg tgg gag gcc atg gag gac ctg gtg atc      538
Asp Thr Asp Phe Leu Asp Thr Trp Glu Ala Met Glu Asp Leu Val Ile
145                      150                      155                      160

acc ggg ctg gtg aag aac atc ggg gtg tca aac ttc aac cat gaa cag      586
Thr Gly Leu Val Lys Asn Ile Gly Val Ser Asn Phe Asn His Glu Gln
165                      170                      175

ctt gag agg ctt ttg aat aag cct ggg ttg agg ttc aag cca cta acc      634
Leu Glu Arg Leu Leu Asn Lys Pro Gly Leu Arg Phe Lys Pro Leu Thr
180                      185                      190

aac cag att ttg atc cga ttt caa atc cag agg aat gtg ata gtg atc      682
Asn Gln Ile Leu Ile Arg Phe Gln Ile Gln Arg Asn Val Ile Val Ile
195                      200                      205

ccc gga tct atc acc cca agt cac att aaa gag aat atc cag gtg ttt      730
Pro Gly Ser Ile Thr Pro Ser His Ile Lys Glu Asn Ile Gln Val Phe
210                      215                      220

gat ttt gaa tta aca cag cac gat atg gat aac atc ctc agc cta aac      778
Asp Phe Glu Leu Thr Gln His Asp Met Asp Asn Ile Leu Ser Leu Asn
225                      230                      235                      240

agg aat ctc cga ctg gcc atg ttc ccc ata act aaa aat cac aaa gac      826
Arg Asn Leu Arg Leu Ala Met Phe Pro Ile Thr Lys Asn His Lys Asp
245                      250                      255

tat cct ttc cac ata gaa tac tga ggaccagaa caacgacagc ggccgctcta      880
Tyr Pro Phe His Ile Glu Tyr *
260

gaggatccaa gcttacgtac gcgtgcatgc ga      912

```

<210> 958
 <211> 3367
 <212> DNA
 <213> Homo sapiens

<220>

<221> CDS
 <222> (236) .. (3310)

<400> 958

```

aagctggtac gcctgcaggt atcgggtccgg aattcccggg tcgacgattt cgtaccagtt      60
cctgagagggg acgcgtgccg cggagccagg cttactacgt gacccggaca ccaggcatac      120
gctaggggca gtcagctgtg ccttctcttt cggagttggt ccgtgctccc acgtgcttcc      180
ccttctccac tggctgggat cccccgggct cggggcgag taataatttt tcacc atg      238
                                     Met
                                     1

cat cgg aaa aag gtg gat aac cga atc cgg att ctc att gag aat gga      286
His Arg Lys Lys Val Asp Asn Arg Ile Arg Ile Leu Ile Glu Asn Gly
          5                      10                      15

gta gct gag cgg caa aga tct ctc ttt gtt gta gtt ggg gat cga gga      334
Val Ala Glu Arg Gln Arg Ser Leu Phe Val Val Val Gly Asp Arg Gly
          20                      25                      30

aaa gat cag gtg gta ata ctt cat cac atg tta tcc aaa gca act gtg      382
Lys Asp Gln Val Val Ile Leu His His Met Leu Ser Lys Ala Thr Val
          35                      40                      45

aag gct cgg cct tca gtg ctg tgg tgt tat aag aaa gag ctg ggg ttt      430
Lys Ala Arg Pro Ser Val Leu Trp Cys Tyr Lys Lys Glu Leu Gly Phe
          50                      55                      60                      65

agc agt cac cgg aag aaa aga atg cga cag ctg cag aag aaa ata aag      478
Ser Ser His Arg Lys Lys Arg Met Arg Gln Leu Gln Lys Lys Ile Lys
          70                      75                      80

aat gga aca ctg aac ata aag cag gac gac ccc ttt gaa ctc ttc ata      526
Asn Gly Thr Leu Asn Ile Lys Gln Asp Asp Pro Phe Glu Leu Phe Ile
          85                      90                      95

gca gcc aca aac att cgc tac tgc tac tac aac gag acc cac aag atc      574
Ala Ala Thr Asn Ile Arg Tyr Cys Tyr Tyr Asn Glu Thr His Lys Ile
          100                     105                     110

ctg ggc aat acc ttc ggc atg tgt gtg ctg cag gat ttt gaa gcc tta      622
Leu Gly Asn Thr Phe Gly Met Cys Val Leu Gln Asp Phe Glu Ala Leu
          115                     120                     125

act cca aac ttg ctg gcc agg act gta gaa aca gtg gaa ggt ggt ggg      670
Thr Pro Asn Leu Leu Ala Arg Thr Val Glu Thr Val Glu Gly Gly Gly
          130                     135                     140                     145

cta gtg gtc atc ctc cta cgg acc atg aac tca ctc aag caa ttg tac      718
Leu Val Val Ile Leu Leu Arg Thr Met Asn Ser Leu Lys Gln Leu Tyr
          150                     155                     160

aca gtg act atg gat gtg cat tcc agg tac aga act gag gcc cat cag      766
Thr Val Thr Met Asp Val His Ser Arg Tyr Arg Thr Glu Ala His Gln
          165                     170                     175

gat gtg gtg gga aga ttt aat gaa agg ttt att ctg tct ctg gcc tct      814
Asp Val Val Gly Arg Phe Asn Glu Arg Phe Ile Leu Ser Leu Ala Ser
          180                     185                     190

tgt aag aag tgt ctc gtc att gat gac cag ctc aac atc ctg ccc atc      862
Cys Lys Lys Cys Leu Val Ile Asp Asp Gln Leu Asn Ile Leu Pro Ile
  
```

195	200	205	
tcc tcc cac gtt gcc acc atg gag gcc ctg cct ccc cag act ccg gat			910
Ser Ser His Val Ala Thr Met Glu Ala Leu Pro Pro Gln Thr Pro Asp			
210	215	220	225
gag agt ctt ggt cct tct gat ctg gag ctg agg gag ttg aag gag agc			958
Glu Ser Leu Gly Pro Ser Asp Leu Glu Leu Arg Glu Leu Lys Glu Ser			
	230	235	240
ttg cag gac acc cag cct gtg ggt gtg ttg gtg gac tgc tgt aag act			1006
Leu Gln Asp Thr Gln Pro Val Gly Val Leu Val Asp Cys Cys Lys Thr			
	245	250	255
cta gac cag gcc aaa gct gtc ttg aaa ttt atc gag ggc atc tct gaa			1054
Leu Asp Gln Ala Lys Ala Val Leu Lys Phe Ile Glu Gly Ile Ser Glu			
	260	265	270
aag acc ctg agg agt act gtt gca ctc aca gct gct cga gga cgg gga			1102
Lys Thr Leu Arg Ser Thr Val Ala Leu Thr Ala Ala Arg Gly Arg Gly			
	275	280	285
aaa tct gca gcc ctg gga ttg gcg att gct ggg gcg gtg gca ttt ggg			1150
Lys Ser Ala Ala Leu Gly Leu Ala Ile Ala Gly Ala Val Ala Phe Gly			
	295	300	305
tac tcc aat atc ttt gtt acc tcc cca agc cct gat aac ctc cat act			1198
Tyr Ser Asn Ile Phe Val Thr Ser Pro Ser Pro Asp Asn Leu His Thr			
	310	315	320
ctg ttt gaa ttt gta ttt aaa gga ttt gat gct ctg caa tat cag gaa			1246
Leu Phe Glu Phe Val Phe Lys Gly Phe Asp Ala Leu Gln Tyr Gln Glu			
	325	330	335
cat ctg gat tat gag att atc cag tct cta aat cct gaa ttt aac aaa			1294
His Leu Asp Tyr Glu Ile Ile Gln Ser Leu Asn Pro Glu Phe Asn Lys			
	340	345	350
gca gtg atc aga gtg aat gta ttt cga gaa cac agg cag act att cag			1342
Ala Val Ile Arg Val Asn Val Phe Arg Glu His Arg Gln Thr Ile Gln			
	355	360	365
tat ata cat cct gca gat gct gtg aag ctg ggc cag gct gaa cta gtt			1390
Tyr Ile His Pro Ala Asp Ala Val Lys Leu Gly Gln Ala Glu Leu Val			
	375	380	385
gtg att gat gaa gct gcc gcc atc ccc ctc ccc ttg gtg aag agc cta			1438
Val Ile Asp Glu Ala Ala Ala Ile Pro Leu Pro Leu Val Lys Ser Leu			
	390	395	400
ctt ggc ccc tac ctt gtt ttc atg gca tcc acc atc aat ggc tat gag			1486
Leu Gly Pro Tyr Leu Val Phe Met Ala Ser Thr Ile Asn Gly Tyr Glu			
	405	410	415
ggc act ggc cgg tca ctg tcc ctc aag cta att cag cag ctc cgt caa			1534
Gly Thr Gly Arg Ser Leu Ser Leu Lys Leu Ile Gln Gln Leu Arg Gln			
	420	425	430
cag agc gcc cag agc cag gtc agc acc act gct gag aat aag acc acg			1582
Gln Ser Ala Gln Ser Gln Val Ser Thr Thr Ala Glu Asn Lys Thr Thr			
	435	440	445
acg aca gcc aga ttg gca tca gcg cgg aca ctg cat gag gtt tcc ctc			1630
Thr Thr Ala Arg Leu Ala Ser Ala Arg Thr Leu His Glu Val Ser Leu			

450	455	460	465	
cag gag tca atc cga tac gcc cct ggg gat gca gtg gag aag tgg ctg				1678
Gln Glu Ser Ile Arg Tyr Ala Pro Gly Asp Ala Val Glu Lys Trp Leu				
	470	475	480	
aat gac ttg ctg tgc ctg gat tgc ctc aac atc act cgg ata gtc tca				1726
Asn Asp Leu Leu Cys Leu Asp Cys Leu Asn Ile Thr Arg Ile Val Ser				
	485	490	495	
ggc tgc ccc ttg cct gaa gct tgt gaa ctg tac tat gtt aat aga gat				1774
Gly Cys Pro Leu Pro Glu Ala Cys Glu Leu Tyr Tyr Val Asn Arg Asp				
	500	505	510	
acc ctc ttt tgc tac cac aag gcc tct gaa gtt ttc ctc caa cgg ctt				1822
Thr Leu Phe Cys Tyr His Lys Ala Ser Glu Val Phe Leu Gln Arg Leu				
	515	520	525	
atg gcc ctc tac gtg gct tct cac tac aag aac tct ccc aat gat ctc				1870
Met Ala Leu Tyr Val Ala Ser His Tyr Lys Asn Ser Pro Asn Asp Leu				
	530	535	540	545
cag atg ctc tcc gat gca cct gct cac cat ctc ttc tgc ctt ctg cct				1918
Gln Met Leu Ser Asp Ala Pro Ala His His Leu Phe Cys Leu Leu Pro				
	550	555	560	
cct gtg ccc ccc acc cag aat gcc ctt cca gaa gtg ctt gct gtt atc				1966
Pro Val Pro Pro Thr Gln Asn Ala Leu Pro Glu Val Leu Ala Val Ile				
	565	570	575	
cag gtg tgc ctt gaa ggg gag att tct cgc cag tcc atc ttg aac agt				2014
Gln Val Cys Leu Glu Gly Glu Ile Ser Arg Gln Ser Ile Leu Asn Ser				
	580	585	590	
ctg tct cga ggc aag aag gct tca ggg gac ctg att cca tgg aca gtg				2062
Leu Ser Arg Gly Lys Lys Ala Ser Gly Asp Leu Ile Pro Trp Thr Val				
	595	600	605	
tca gaa cag ttc caa gat cca gac ttt ggt ggt ctg tct ggt gga agg				2110
Ser Glu Gln Phe Gln Asp Pro Asp Phe Gly Gly Leu Ser Gly Gly Arg				
	610	615	620	625
gtc gtt cgc att gct gtt cac cca gat tat caa ggg atg ggc tat ggc				2158
Val Val Arg Ile Ala Val His Pro Asp Tyr Gln Gly Met Gly Tyr Gly				
	630	635	640	
agc cgt gct ctg cag ctg ctg cag atg tac tat gaa ggc agg ttt cct				2206
Ser Arg Ala Leu Gln Leu Leu Gln Met Tyr Tyr Glu Gly Arg Phe Pro				
	645	650	655	
tgt ctg gag gaa aag gtc ctt gag aca cca cag gaa att cac acc gta				2254
Cys Leu Glu Glu Lys Val Leu Glu Thr Pro Gln Glu Ile His Thr Val				
	660	665	670	
agc agc gag gct gtc agc ttg ttg gaa gag gtc atc act ccc cgg aag				2302
Ser Ser Glu Ala Val Ser Leu Leu Glu Glu Val Ile Thr Pro Arg Lys				
	675	680	685	
gac ctg cct cct tta ctc ctc aaa ttg aat gag agg cct gcc gaa cgc				2350
Asp Leu Pro Pro Leu Leu Leu Lys Leu Asn Glu Arg Pro Ala Glu Arg				
	690	695	700	705
ctg gat tac ctg ggt gtt tcc tat ggc ttg acc ccc agg ctc ctc aag				2398
Leu Asp Tyr Leu Gly Val Ser Tyr Gly Leu Thr Pro Arg Leu Leu Lys				

710	715	720	
ttc tgg aaa cga gct gga ttt gtt cct gtt tat ctg aga cag acc ccg Phe Trp Lys Arg Ala Gly Phe Val Pro Val Tyr Leu Arg Gln Thr Pro 725 730 735			2446
aat gac ctg acc gga gag cac tcg tgc atc atg ctg aag acg ctc act Asn Asp Leu Thr Gly Glu His Ser Cys Ile Met Leu Lys Thr Leu Thr 740 745 750			2494
gat gag gat gag gct gac cag gga ggc tgg ctt gca gcc ttc tgg aaa Asp Glu Asp Glu Ala Asp Gln Gly Gly Trp Leu Ala Ala Phe Trp Lys 755 760 765			2542
gat ttc cga cgg cgg ttc cta gcc ttg ctc tcc tac cag ttc agt acc Asp Phe Arg Arg Arg Phe Leu Ala Leu Leu Ser Tyr Gln Phe Ser Thr 770 775 780 785			2590
ttc tct cct tcc ctg gct ctg aac atc att cag aac agg aac atg ggg Phe Ser Pro Ser Leu Ala Leu Asn Ile Ile Gln Asn Arg Asn Met Gly 790 795 800			2638
aag cca gcc cag cct gcc ctg agc cgg gag gag ctg gaa gca ctc ttc Lys Pro Ala Gln Pro Ala Leu Ser Arg Glu Glu Leu Glu Ala Leu Phe 805 810 815			2686
ctc ccc tat gac ctg aag cgg ctg gag atg tat tca cgg aat atg gtg Leu Pro Tyr Asp Leu Lys Arg Leu Glu Met Tyr Ser Arg Asn Met Val 820 825 830			2734
gac tat cac ctc atc atg gac atg atc ccg gcc atc tct cgc atc tat Asp Tyr His Leu Ile Met Asp Met Ile Pro Ala Ile Ser Arg Ile Tyr 835 840 845			2782
ttc ctg aac cag ctg ggg gac ctg gcc ctg tct gcg gct cag tcg gct Phe Leu Asn Gln Leu Gly Asp Leu Ala Leu Ser Ala Ala Gln Ser Ala 850 855 860 865			2830
ctt ctc ttg ggg att ggc ctg cag cat aag tct gtg gac cag ctg gaa Leu Leu Leu Gly Ile Gly Leu Gln His Lys Ser Val Asp Gln Leu Glu 870 875 880			2878
aag gag att gag ctg ccc tcg ggc cag ttg atg gga ctt ttc aac cgg Lys Glu Ile Glu Leu Pro Ser Gly Gln Leu Met Gly Leu Phe Asn Arg 885 890 895			2926
atc atc cgc aaa gtt gtg aag cta ttt aat gaa gtt cag gaa aag gcc Ile Ile Arg Lys Val Val Lys Leu Phe Asn Glu Val Gln Glu Lys Ala 900 905 910			2974
att gag gag cag atg gtg gca gcg aag gat gtg gtc atg gag ccc acg Ile Glu Glu Gln Met Val Ala Ala Lys Asp Val Val Met Glu Pro Thr 915 920 925			3022
atg aag acc ctc agt gac gac cta gat gaa gca gca aag gaa ttt cag Met Lys Thr Leu Ser Asp Asp Leu Asp Glu Ala Ala Lys Glu Phe Gln 930 935 940 945			3070
gag aaa cac aag aag gaa gta ggg aag ctg aag agc atg gac ctc tct Glu Lys His Lys Lys Glu Val Gly Lys Leu Lys Ser Met Asp Leu Ser 950 955 960			3118
gaa tac ata atc cgt ggg gac gat gaa gag tgg aat gaa gtt ttg aac Glu Tyr Ile Ile Arg Gly Asp Asp Glu Glu Trp Asn Glu Val Leu Asn			3166

965	970	975	
aaa gct ggg ccg aac gcc tgc atc atc agc ctg aaa agt gac aag aaa			3214
Lys Ala Gly Pro Asn Ala Ser Ile Ile Ser Leu Lys Ser Asp Lys Lys			
980	985	990	
agg aag tta gag gcc aaa caa gaa ccc aaa cag agc aag aag ttg aag			3262
Arg Lys Leu Glu Ala Lys Gln Glu Pro Lys Gln Ser Lys Lys Leu Lys			
995	1000	1005	
aac aga gag aca aag aac aaa aaa gat atg aaa ctg aag cgg aag aaa			3310
Asn Arg Glu Thr Lys Asn Lys Lys Asp Met Lys Leu Lys Arg Lys Lys			
1010	1015	1020	1025
tagtgaagag aaactcgggc atctgtgttt gatcatggga agatactctc actaact			3367
<210> 959			
<211> 2485			
<212> DNA			
<213> Homo sapiens			
<220>			
<221> CDS			
<222> (31)..(2238)			
<400> 959			
taagcttgcg gccgctacgg tgctgacaag	atg gcg gct ggc gga gct gtc		51
	Met Ala Ala Gly Gly Ala Val		
	1	5	
gct gcg gcg ccc gag tgc cgg ctt ctc ccc tac gcg cta cac aag tgg			99
Ala Ala Ala Pro Glu Cys Arg Leu Leu Pro Tyr Ala Leu His Lys Trp			
10	15	20	
agc tcc ttt tcc tcc acc tac ctt ccc gag aac att tta gtg gac aaa			147
Ser Ser Phe Ser Ser Thr Tyr Leu Pro Glu Asn Ile Leu Val Asp Lys			
25	30	35	
cca aat gac caa tct tca aga tgg tct tca gag agc aac tat cct ccc			195
Pro Asn Asp Gln Ser Ser Arg Trp Ser Ser Glu Ser Asn Tyr Pro Pro			
40	45	50	55
cag tac ttg att cta aag ctc gaa agg cct gct ata gtt cag aat atc			243
Gln Tyr Leu Ile Leu Lys Leu Glu Arg Pro Ala Ile Val Gln Asn Ile			
60	65	70	
aca ttt gga aaa tat gag aaa act cat gtt tgc aat ttg aag aaa ttt			291
Thr Phe Gly Lys Tyr Glu Lys Thr His Val Cys Asn Leu Lys Lys Phe			
75	80	85	
aaa gtc ttt ggt gga atg aat gaa gaa aat atg aca gag ctg ttg tcc			339
Lys Val Phe Gly Gly Met Asn Glu Glu Asn Met Thr Glu Leu Leu Ser			
90	95	100	
agt ggc tta aag aat gat tat aac aaa gaa aca ttc acc ttg aag cat			387
Ser Gly Leu Lys Asn Asp Tyr Asn Lys Glu Thr Phe Thr Leu Lys His			
105	110	115	
aaa att gat gaa cag atg ttc cct tgt cga ttc att aaa ata gtt cca			435
Lys Ile Asp Glu Gln Met Phe Pro Cys Arg Phe Ile Lys Ile Val Pro			
120	125	130	135

ctc ttg tcc tgg gga ccc agc ttt aac ttt agc atc tgg tat gtt gaa	483
Leu Leu Ser Trp Gly Pro Ser Phe Asn Phe Ser Ile Trp Tyr Val Glu	
140 145 150	
ctt agt ggc att gat gat cct gat ata gta caa cct tgt ctc aac tgg	531
Leu Ser Gly Ile Asp Asp Pro Asp Ile Val Gln Pro Cys Leu Asn Trp	
155 160 165	
tat agc aag tac cgt gaa cag gaa gct att cgc ctt tgc cta aaa cac	579
Tyr Ser Lys Tyr Arg Glu Gln Glu Ala Ile Arg Leu Cys Leu Lys His	
170 175 180	
ttc aga caa cac aac tat aca gaa gct ttt gag tca ctg caa aag aaa	627
Phe Arg Gln His Asn Tyr Thr Glu Ala Phe Glu Ser Leu Gln Lys Lys	
185 190 195	
acc aag att gca ctg gaa cat ccc atg tca aca gat att cat gac aag	675
Thr Lys Ile Ala Leu Glu His Pro Met Ser Thr Asp Ile His Asp Lys	
200 205 210 215	
ctg gtg ttg aag ggt gat ttt gat gct tgc gaa gag ttg att gaa aag	723
Leu Val Leu Lys Gly Asp Phe Asp Ala Cys Glu Glu Leu Ile Glu Lys	
220 225 230	
gct gta aat gat ggc ttg ttc aat cag tat atc agt caa cag gaa tat	771
Ala Val Asn Asp Gly Leu Phe Asn Gln Tyr Ile Ser Gln Gln Glu Tyr	
235 240 245	
aag cca cga tgg agt caa atc att ccc aaa agt acc aaa ggt gat ggg	819
Lys Pro Arg Trp Ser Gln Ile Ile Pro Lys Ser Thr Lys Gly Asp Gly	
250 255 260	
gaa gat aac cgt cca gga atg aga gga ggc cat cag atg gtt att gat	867
Glu Asp Asn Arg Pro Gly Met Arg Gly Gly His Gln Met Val Ile Asp	
265 270 275	
gtt caa aca gag act gtt tat ttg ttt ggt ggc tgg gat gga aca caa	915
Val Gln Thr Glu Thr Val Tyr Leu Phe Gly Gly Trp Asp Gly Thr Gln	
280 285 290 295	
gat ctt gct gac ttc tgg gcg tac agt gtg aag gag aac cag tgg aca	963
Asp Leu Ala Asp Phe Trp Ala Tyr Ser Val Lys Glu Asn Gln Trp Thr	
300 305 310	
tgt atc tct aga gac act gaa aaa gag aat ggt cct agt gcc aga tcg	1011
Cys Ile Ser Arg Asp Thr Glu Lys Glu Asn Gly Pro Ser Ala Arg Ser	
315 320 325	
tgt cat aaa atg tgc att gat att caa cgg agg caa atc tac aca ttg	1059
Cys His Lys Met Cys Ile Asp Ile Gln Arg Arg Gln Ile Tyr Thr Leu	
330 335 340	
ggg cgt tac ttg gat tcc tct gtg agg aac agc aaa tct ctg aaa agt	1107
Gly Arg Tyr Leu Asp Ser Ser Val Arg Asn Ser Lys Ser Leu Lys Ser	
345 350 355	
gac ttc tat cgt tat gac att gat aca aac aca tgg atg tta cta agt	1155
Asp Phe Tyr Arg Tyr Asp Ile Asp Thr Asn Thr Trp Met Leu Leu Ser	
360 365 370 375	
gag gat act gct gct gat gga ggg ccg aaa ttg gtg ttt gat cat cag	1203
Glu Asp Thr Ala Ala Asp Gly Gly Pro Lys Leu Val Phe Asp His Gln	
380 385 390	

atg tgt atg gac tca gaa aaa cat atg atc tac act ttt ggt ggt aga	1251
Met Cys Met Asp Ser Glu Lys His Met Ile Tyr Thr Phe Gly Gly Arg	
395 400 405	
att ttg act tgt aat ggc agc gta gat gac agc aga gcc agt gaa cca	1299
Ile Leu Thr Cys Asn Gly Ser Val Asp Asp Ser Arg Ala Ser Glu Pro	
410 415 420	
caa ttc agt ggc ttg ttt gct ttc aac tgt caa tgt caa acc tgg aaa	1347
Gln Phe Ser Gly Leu Phe Ala Phe Asn Cys Gln Cys Gln Thr Trp Lys	
425 430 435	
ctt ctt cga gag gac tcc tgt aat gct ggg cct gag gac atc cag tct	1395
Leu Leu Arg Glu Asp Ser Cys Asn Ala Gly Pro Glu Asp Ile Gln Ser	
440 445 450 455	
cga ata gga cac tgc atg tta ttc cac tca aaa aat cgt tgc tta tat	1443
Arg Ile Gly His Cys Met Leu Phe His Ser Lys Asn Arg Cys Leu Tyr	
460 465 470	
gta ttt ggt ggc cag cga tca aag acc tat ttg aat gat ttc ttt agt	1491
Val Phe Gly Gly Gln Arg Ser Lys Thr Tyr Leu Asn Asp Phe Phe Ser	
475 480 485	
tat gat gtg gac tct gat cat gta gac ata ata tca gat ggc acc aag	1539
Tyr Asp Val Asp Ser Asp His Val Asp Ile Ile Ser Asp Gly Thr Lys	
490 495 500	
aaa gac tct ggg atg gtt cca atg aca gga ttt aca cag aga gca act	1587
Lys Asp Ser Gly Met Val Pro Met Thr Gly Phe Thr Gln Arg Ala Thr	
505 510 515	
att gat cca gaa ctg aat gaa ata cac gtc tta tct gga ctc agc aaa	1635
Ile Asp Pro Glu Leu Asn Glu Ile His Val Leu Ser Gly Leu Ser Lys	
520 525 530 535	
gat aag gaa aag agg gaa gaa aat gtt aga aat tca ttc tgg att tat	1683
Asp Lys Glu Lys Arg Glu Glu Asn Val Arg Asn Ser Phe Trp Ile Tyr	
540 545 550	
gac att gtg agg aat agt tgg tct tgt gtc tat aag aat gat caa gct	1731
Asp Ile Val Arg Asn Ser Trp Ser Cys Val Tyr Lys Asn Asp Gln Ala	
555 560 565	
gca aag gat aat cca act aaa agt ctt cag gaa gaa gaa cca tgt cca	1779
Ala Lys Asp Asn Pro Thr Lys Ser Leu Gln Glu Glu Glu Pro Cys Pro	
570 575 580	
agg ttt gcc cat cag ctt gta tac gat gag cta cac aag gtt cat tac	1827
Arg Phe Ala His Gln Leu Val Tyr Asp Glu Leu His Lys Val His Tyr	
585 590 595	
tta ttt ggt ggg aat cca gga aaa tct tgc tct cca aag atg aga tta	1875
Leu Phe Gly Gly Asn Pro Gly Lys Ser Cys Ser Pro Lys Met Arg Leu	
600 605 610 615	
gat gac ttc tgg tca ctg aag ttg tgt aga cct tca aaa gat tat tta	1923
Asp Asp Phe Trp Ser Leu Lys Leu Cys Arg Pro Ser Lys Asp Tyr Leu	
620 625 630	
ctg agg cat tgc aag tac ctc ata aga aaa cac agg ttt gaa gaa aag	1971
Leu Arg His Cys Lys Tyr Leu Ile Arg Lys His Arg Phe Glu Glu Lys	
635 640 645	

```

gcc caa gtg gat ccc ctt agt gct ctg aaa tat tta caa aat gat ctt      2019
Ala Gln Val Asp Pro Leu Ser Ala Leu Lys Tyr Leu Gln Asn Asp Leu
      650                      655                      660

tat ata act gtg gat cat tca gac cca gaa gag aca aaa gag ttt cag      2067
Tyr Ile Thr Val Asp His Ser Asp Pro Glu Glu Thr Lys Glu Phe Gln
      665                      670                      675

ctc ctg gca tca gct cta ttc aaa tct ggt tca gat ttt aca gct ctg      2115
Leu Leu Ala Ser Ala Leu Phe Lys Ser Gly Ser Asp Phe Thr Ala Leu
      680                      685                      690                      695

ggc ttt tct gat gtg gat cac acc tat gct caa aga act cag ctc ttt      2163
Gly Phe Ser Asp Val Asp His Thr Tyr Ala Gln Arg Thr Gln Leu Phe
      700                      705                      710

gac acc tta gta aat ttc ttt cct gac agc atg act cct cct aaa ggc      2211
Asp Thr Leu Val Asn Phe Phe Pro Asp Ser Met Thr Pro Pro Lys Gly
      715                      720                      725

aac ctg gta gac ctc atc aca ctg taa ctgaa gagtcactgg acacagaaat      2263
Asn Leu Val Asp Leu Ile Thr Leu *
      730                      735

ggaaaaacagg agtcgatttt cgcgtcttttg gattgcagct ccactgactg acagtaaagc      2323

tgcagtgatt gaggactgca ccagagttct gaagggatct taaccatcac aagtttttac      2383

cctcttcctt catgcctgac ctcaaccccg ctctcctcat cctattccta aattaggcta      2443

ataaagtga aattggtatac tttccagtta aaaaaaaaaa aa                        2485

```

<210> 960
 <211> 823
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (300)..(695)

```

<400> 960
gtagctcccg ctttcgcctc ttcgtttatg actccgttgg gtcccggccc tcctagagag      60

gcctccatag cgcaggttcg tgggttctcg cggacctttt tccgtgtagc tttctgcttc      120

ttcccggcat tcctgtttcc gttttctcac agccctctgg cttttccacc actgagacac      180

tttgcgctca ggacttcagt gacgtcatct tttcgccggc cgcggacacc cgccggtgga      240

agaagaaaca gctccgccgt ccttcgcttc ttttgcgtgg ctgctgctcc ttcggcatc      299
atg gcg ccg tcg ctg tgg aag ggg ctg gtg ggc atc ggt ctc ttt gcc      347
Met Ala Pro Ser Leu Trp Lys Gly Leu Val Gly Ile Gly Leu Phe Ala
      1              5              10              15

cta gcc cac gcc gcc ttt tcc gct gcg cag cat cgt tct tat atg cga      395
Leu Ala His Ala Ala Phe Ser Ala Ala Gln His Arg Ser Tyr Met Arg
      20              25              30

tta aca gaa aaa gaa gat gaa tca ctg cca ata gat ata gtt cct cag      443

```

```
<210> 961
<211> 1542
<212> DNA
<213> Homo sapiens
```

<400> 961

2657

40	45	50	
tcc atc tgg gac acc gca ggg cgg gag cag ttc cac ggc ctg gga tcc Ser Ile Trp Asp Thr Ala Gly Arg Glu Gln Phe His Gly Leu Gly Ser 55 60 65			428
atg tac tgc cgg ggg gcg gcc gcc atc atc ctc acc tat gat gtg aat Met Tyr Cys Arg Gly Ala Ala Ala Ile Ile Leu Thr Tyr Asp Val Asn 70 75 80			476
cac cgg cag agc ctg gtg gag ctg gag gac cgg ttc ctg ggc ctg aca His Arg Gln Ser Leu Val Glu Leu Glu Asp Arg Phe Leu Gly Leu Thr 85 90 95			524
gac aca gcc agc aaa gac tgc ctc ttc gcc atc gtg ggg aac aaa gtg Asp Thr Ala Ser Lys Asp Cys Leu Phe Ala Ile Val Gly Asn Lys Val 100 105 110 115			572
gac ctc act gag gag ggg gcc ttg gcg ggc cag gag aag gaa gag tgc Asp Leu Thr Glu Glu Gly Ala Leu Ala Gly Gln Glu Lys Glu Glu Cys 120 125 130			620
agt ccc aat atg gac gct ggg gac cgt gtc tcc cca agg gca cct aag Ser Pro Asn Met Asp Ala Gly Asp Arg Val Ser Pro Arg Ala Pro Lys 135 140 145			668
cag gtg cag ctg gag gat gcg gtg gcc ctt tat aaa aag atc ctc aag Gln Val Gln Leu Glu Asp Ala Val Ala Leu Tyr Lys Lys Ile Leu Lys 150 155 160			716
tac aag atg ctg gat gag cag gat gtg ccg gcc gct gag caa atg tgc Tyr Lys Met Leu Asp Glu Gln Asp Val Pro Ala Ala Glu Gln Met Cys 165 170 175			764
ttt gag acc agc gcc aag acc ggc tac aat gtg gac ctc ctg ttt gag Phe Glu Thr Ser Ala Lys Thr Gly Tyr Asn Val Asp Leu Leu Phe Glu 180 185 190 195			812
acc ctc ttt gac ctg gtg gtg cca atg atc tta cag cag aga gct gag Thr Leu Phe Asp Leu Val Val Pro Met Ile Leu Gln Gln Arg Ala Glu 200 205 210			860
agg ccg tca cac aca gtg gat ata tcc agt cat aag cca ccc aag agg Arg Pro Ser His Thr Val Asp Ile Ser Ser His Lys Pro Pro Lys Arg 215 220 225			908
acc aga tct ggg tgt tgt gcc tga ctttcgaggg cctcctggac tcagactgtg Thr Arg Ser Gly Cys Cys Ala * 230 235			962
catgttggga aggggtctga ccaggcaagc tgtgatctga aaggagcaag gaacagcaag			1022
gaattatttt ccagaatgac acccgagca gaatgttgga gtggaaatga tggctggcta			1082
tgaagaggag gtcaacgtgt gtggtctcct cagtctctgt cagaggggtg gggaggtggg			1142
aaacaggaat cctctgcaaa gcccaatctg cagagtcgag acccctgggtg ctctctgccc			1202
cgctgcctgg cactggctcct ttgcagccag ccaccaacgg ccccttgcc cttgcagagg			1262
cagaagcctg cgtctgcacc tgcacctctg accgtttcag caccctgggt tgttaccacg			1322
tcctacaact ctgacatttc ttgtttctca gcgtttctct tcactgtgag ttgtctttgg			1382

tcctcccact tgggtacttgt atcttgatgc ttataaatcc tgactctcga cgtgttcatt 1442
 tatacaaaat caggaataac ttgttttta tactgattgc agcaatgttg gctacatgta 1502
 ttattaaaga ggatttttgg aacaacttaa aaaaaaaaaa 1542

<210> 962
 <211> 6707
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (420)..(5426)

<400> 962
 actcgcgttc ggaaaatgat agggtagaca agaatttgaa aaacacttct gctgaagaac 60
 atgttgctca aggagatgcc actcttgaa attccacaaa ttagactcc tcaccatcct 120
 taagttcagt gactgttgtg cctctgaggg aatcgatga tccagatgta attcctctgt 180
 ttgacaaaag aactgttttg gaaggtagca cagccagcac ctcccctgcg gatcactctg 240
 ctctccctaa ccaaagtctg actgttaggg aatcagaagt ccttaagaca agtgacagca 300
 aagaagggtgg tgaaggtttc acagtagata caccagcaaa agcaagcatc actagcaaaa 360
 gacacattcc agaagctcac caggctactt tattggatgg taaacaagga aaggtaatc 419
 atg cct ctt gga agt aag tta acg ggc gtg att gtg gaa aat gag aat 467
 Met Pro Leu Gly Ser Lys Leu Thr Gly Val Ile Val Glu Asn Glu Asn
 1 5 10 15
 att acc aaa gaa ggt ggc tta gtg gac atg gcc aag aaa gaa aat gac 515
 Ile Thr Lys Glu Gly Gly Leu Val Asp Met Ala Lys Lys Glu Asn Asp
 20 25 30
 tta aat gca gag ccc aat tta aag cag aca att aaa gca aca gta gag 563
 Leu Asn Ala Glu Pro Asn Leu Lys Gln Thr Ile Lys Ala Thr Val Glu
 35 40 45
 aat ggc aag aag gat ggc att gct gtt gat cat gtt gta ggc ctg aat 611
 Asn Gly Lys Lys Asp Gly Ile Ala Val Asp His Val Val Gly Leu Asn
 50 55 60
 aca gaa aaa tat gct gaa act gtc aaa ctt aag cat aaa aga agc cca 659
 Thr Glu Lys Tyr Ala Glu Thr Val Lys Leu Lys His Lys Arg Ser Pro
 65 70 75 80
 ggt aaa gta aaa gac ata tca att gat gtt gaa aga agg aat gaa aac 707
 Gly Lys Val Lys Asp Ile Ser Ile Asp Val Glu Arg Arg Asn Glu Asn
 85 90 95
 agt gag gta gac acc agt gct gga agt ggc tct gca ccc tct gtt tta 755
 Ser Glu Val Asp Thr Ser Ala Gly Ser Gly Ser Ala Pro Ser Val Leu
 100 105 110
 cac caa agg aac gga caa act gag gat gtg gca act ggg cct agg aga 803
 His Gln Arg Asn Gly Gln Thr Glu Asp Val Ala Thr Gly Pro Arg Arg
 115 120 125

gca gaa aag act tct gtt gcc act agt act gaa ggg aag gac aaa gat	851
Ala Glu Lys Thr Ser Val Ala Thr Ser Thr Glu Gly Lys Asp Lys Asp	
130 135 140	
gtc acc tta agt cca gtg aag gct ggg cct gcc aca acc act tct tca	899
Val Thr Leu Ser Pro Val Lys Ala Gly Pro Ala Thr Thr Thr Ser Ser	
145 150 155 160	
gaa aca aga caa agt gag gtg gct ttg cct tgc acc agc att gag gca	947
Glu Thr Arg Gln Ser Glu Val Ala Leu Pro Cys Thr Ser Ile Glu Ala	
165 170 175	
gat gaa ggc ctc ata ata gga aca cat tcc aga aat aat cct ctt cat	995
Asp Glu Gly Leu Ile Ile Gly Thr His Ser Arg Asn Asn Pro Leu His	
180 185 190	
gtt ggt gca gaa gcc agt gaa tgc act gtt ttt gct gca gct gaa gaa	1043
Val Gly Ala Glu Ala Ser Glu Cys Thr Val Phe Ala Ala Ala Glu Glu	
195 200 205	
ggg ggt gct gtt gtc aca gag gga ttt gct gaa agt gaa acc ttc ctc	1091
Gly Gly Ala Val Val Thr Glu Gly Phe Ala Glu Ser Glu Thr Phe Leu	
210 215 220	
aca agc act aag gaa ggg gaa agt ggg gag tgt gct gtg gct gaa tct	1139
Thr Ser Thr Lys Glu Gly Glu Ser Gly Glu Cys Ala Val Ala Glu Ser	
225 230 235 240	
gag gac aga gca gca gac cta ctg gct gtg cat gca gtt aaa atc gaa	1187
Glu Asp Arg Ala Ala Asp Leu Leu Ala Val His Ala Val Lys Ile Glu	
245 250 255	
gcc aat gta aat agc gtt gtg aca gag gaa aag gat gat gct gta acc	1235
Ala Asn Val Asn Ser Val Val Thr Glu Lys Asp Asp Ala Val Thr	
260 265 270	
agt gca ggc tct gaa gaa aaa tgt gat ggt tct tta agt aga gac tca	1283
Ser Ala Gly Ser Glu Glu Lys Cys Asp Gly Ser Leu Ser Arg Asp Ser	
275 280 285	
gaa ata gtt gaa gga act att act ttt att agt gaa gtt gaa agt gat	1331
Glu Ile Val Glu Gly Thr Ile Thr Phe Ile Ser Glu Val Glu Ser Asp	
290 295 300	
gga gca gtt aca agt gct gga aca gag ata aga gca gga tct ata agc	1379
Gly Ala Val Thr Ser Ala Gly Thr Glu Ile Arg Ala Gly Ser Ile Ser	
305 310 315 320	
agt gaa gag gtg gat ggc tcc cag gga aat atg atg aga atg ggt ccc	1427
Ser Glu Glu Val Asp Gly Ser Gln Gly Asn Met Met Arg Met Gly Pro	
325 330 335	
aaa aaa gaa aca gag ggc act gtg aca tgt aca gga gca gaa ggc aga	1475
Lys Lys Glu Thr Glu Gly Thr Val Thr Cys Thr Gly Ala Glu Gly Arg	
340 345 350	
agt gat aac ttt gtg atc tgc tca gta act gga gca ggg ccc cgg gag	1523
Ser Asp Asn Phe Val Ile Cys Ser Val Thr Gly Ala Gly Pro Arg Glu	
355 360 365	
gaa cgc atg gtt aca ggt gca ggt gtt gtc ctg gga gat aat gat gca	1571
Glu Arg Met Val Thr Gly Ala Gly Val Val Leu Gly Asp Asn Asp Ala	
370 375 380	

cca cca gga aca agt gcc agc caa gaa gga gat ggt tct gtg aat gat	1619
Pro Pro Gly Thr Ser Ala Ser Gln Glu Gly Asp Gly Ser Val Asn Asp	
385 390 395 400	
ggt aca gaa ggt gag agt gca gtc acc agc acg ggg ata aca gaa gat	1667
Gly Thr Glu Gly Glu Ser Ala Val Thr Ser Thr Gly Ile Thr Glu Asp	
405 410 415	
gga gag ggg cca gca agt tgc aca ggt tca gaa gat agc agc gaa ggc	1715
Gly Glu Gly Pro Ala Ser Cys Thr Gly Ser Glu Asp Ser Ser Glu Gly	
420 425 430	
ttt gct ata agt tct gaa tgc gaa gaa aat gga gag agt gca atg gac	1763
Phe Ala Ile Ser Ser Glu Ser Glu Asn Gly Glu Ser Ala Met Asp	
435 440 445	
agc aca gtg gcc aaa gaa ggc act aat gta cca tta gtt gct gct ggt	1811
Ser Thr Val Ala Lys Glu Gly Thr Asn Val Pro Leu Val Ala Ala Gly	
450 455 460	
cct tgt gat gat gaa ggc att gtg act agc aca ggc gca aaa gag gaa	1859
Pro Cys Asp Asp Glu Gly Ile Val Thr Ser Thr Gly Ala Lys Glu Glu	
465 470 475 480	
gac gag gaa ggg gag gat gtt gtg act agt act gga aga gga aat gaa	1907
Asp Glu Glu Gly Glu Asp Val Val Thr Ser Thr Gly Arg Gly Asn Glu	
485 490 495	
att ggg cat gct tca act tgt aca ggg tta gga gaa gaa agt gaa ggg	1955
Ile Gly His Ala Ser Thr Cys Thr Gly Leu Gly Glu Glu Ser Glu Gly	
500 505 510	
gtc ttg att tgt gaa agt gca gaa ggg gac agt cag att ggt act gtg	2003
Val Leu Ile Cys Glu Ser Ala Glu Gly Asp Ser Gln Ile Gly Thr Val	
515 520 525	
gta gag cat gtg gaa gct gag gct gga gct gcc atc atg aat gca aat	2051
Val Glu His Val Glu Ala Glu Ala Gly Ala Ala Ile Met Asn Ala Asn	
530 535 540	
gaa aat aat gtt gac agc atg agt ggc aca gag aaa gga agt aaa gac	2099
Glu Asn Asn Val Asp Ser Met Ser Gly Thr Gly Lys Gly Ser Lys Asp	
545 550 555 560	
aca gat atc tgc tcc agt gca aaa ggg att gta gaa agc agt gtg acc	2147
Thr Asp Ile Cys Ser Ser Ala Lys Gly Ile Val Glu Ser Ser Val Thr	
565 570 575	
agt gca gtc tca gga aag gat gaa gtg aca cca gtt cca gga ggt tgt	2195
Ser Ala Val Ser Gly Lys Asp Glu Val Thr Pro Val Pro Gly Gly Cys	
580 585 590	
gag ggt cct atg act agt gct gca tct gat caa agt gac agt cag ctc	2243
Glu Gly Pro Met Thr Ser Ala Ala Ser Asp Gln Ser Asp Ser Gln Leu	
595 600 605	
gaa aaa gtt gaa gat acc act att tcc act ggc ctg gtc ggg ggt agt	2291
Glu Lys Val Glu Asp Thr Thr Ile Ser Thr Gly Leu Val Gly Gly Ser	
610 615 620	
tac gat gtt ctt gta tct ggt gaa gtc cca gaa tgt gaa gtt gct cac	2339
Tyr Asp Val Leu Val Ser Gly Glu Val Pro Glu Cys Glu Val Ala His	
625 630 635 640	

aca tca cca agt gaa aaa gaa gat gag gac atc atc acc tct gta gaa	2387
Thr Ser Pro Ser Glu Lys Glu Asp Glu Asp Ile Ile Thr Ser Val Glu	
645 650 655	
aat gaa gag tgt gat ggt ctc atg gca act aca gcc agt ggt gat att	2435
Asn Glu Glu Cys Asp Gly Leu Met Ala Thr Thr Ala Ser Gly Asp Ile	
660 665 670	
acc aac cag aat agc tta gca ggg ggt aaa aat caa gcc aaa gtt ttg	2483
Thr Asn Gln Asn Ser Leu Ala Gly Gly Lys Asn Gln Gly Lys Val Leu	
675 680 685	
att att tcc acc agt acc aca aat gat tac acc cct cag gta agc gca	2531
Ile Ile Ser Thr Ser Thr Asn Asp Tyr Thr Pro Gln Val Ser Ala	
690 695 700	
att aca gat gtg gaa gga ggt ctc tca gat gct ctg aga act gaa gaa	2579
Ile Thr Asp Val Glu Gly Gly Leu Ser Asp Ala Leu Arg Thr Glu Glu	
705 710 715 720	
aat atg gaa ggt acc aga gta acc aca gaa gaa ttt gag gcc ccc atg	2627
Asn Met Glu Gly Thr Arg Val Thr Thr Glu Glu Phe Glu Ala Pro Met	
725 730 735	
ccc agt gca gtc tca gga gat gac agc caa ctc act gcc agc aga agt	2675
Pro Ser Ala Val Ser Gly Asp Asp Ser Gln Leu Thr Ala Ser Arg Ser	
740 745 750	
gaa gag aaa gat gag tgt gcc atg att tcc aca agc ata ggg gaa gaa	2723
Glu Glu Lys Asp Glu Cys Ala Met Ile Ser Thr Ser Ile Gly Glu Glu	
755 760 765	
ttc gaa ttg cct atc tcc agt gca aca acc atc aag tgt gct gaa agt	2771
Phe Glu Leu Pro Ile Ser Ser Ala Thr Thr Ile Lys Cys Ala Glu Ser	
770 775 780	
ctt cag ccg gtt gct gca gca gtg gaa gaa agg gct aca ggt cca gtc	2819
Leu Gln Pro Val Ala Ala Ala Val Glu Glu Arg Ala Thr Gly Pro Val	
785 790 795 800	
ttg ata agc acc gcc gac ttt gag ggg cct atg ccc agt gcg ccc cca	2867
Leu Ile Ser Thr Ala Asp Phe Glu Gly Pro Met Pro Ser Ala Pro Pro	
805 810 815	
gaa gct gaa agt cct ctt gcc tca acc agc aag gag gag aag gat gaa	2915
Glu Ala Glu Ser Pro Leu Ala Ser Thr Ser Lys Glu Glu Lys Asp Glu	
820 825 830	
tgt gct ctc att tcc act agc ata gca gaa gaa tgt gag gct tct gtt	2963
Cys Ala Leu Ile Ser Thr Ser Ile Ala Glu Glu Cys Glu Ala Ser Val	
835 840 845	
tcc ggt gta gtt gtt gaa agt gaa aat gag cga gct gcc aca gtc atg	3011
Ser Gly Val Val Val Glu Ser Glu Asn Glu Arg Ala Gly Thr Val Met	
850 855 860	
gaa gaa aaa gac ggg agt ggc atc atc tct acg agc tcg gtg gaa gac	3059
Glu Glu Lys Asp Gly Ser Gly Ile Ile Ser Thr Ser Ser Val Glu Asp	
865 870 875 880	
tgt gag ggc cca gtg tcc agt gct gtc cct caa gag gaa ggc gac ccc	3107
Cys Glu Gly Pro Val Ser Ser Ala Val Pro Gln Glu Glu Gly Asp Pro	
885 890 895	

tca gtc aca cca gcg gaa gag atg ggt gac acc gcc atg att tcc aca Ser Val Thr Pro Ala Glu Glu Met Gly Asp Thr Ala Met Ile Ser Thr 900 905 910	3155
agc acc tct gaa ggg tgt gaa gca gtc atg att ggt gct gtc ctc cag Ser Thr Ser Glu Gly Cys Glu Ala Val Met Ile Gly Ala Val Leu Gln 915 920 925	3203
gat gaa gat cgg ctc acc atc aca aga gta gaa gac ttg agc gat gct Asp Glu Asp Arg Leu Thr Ile Thr Arg Val Glu Asp Leu Ser Asp Ala 930 935 940	3251
gcc atc atc tcc acc agc aca gca gaa tgt atg cca att tcc gcc agc Ala Ile Ile Ser Thr Ser Thr Ala Glu Cys Met Pro Ile Ser Ala Ser 945 950 955 960	3299
att gac aga cat gaa gag aat cag ctg act gca gac aac cca gaa ggg Ile Asp Arg His Glu Glu Asn Gln Leu Thr Ala Asp Asn Pro Glu Gly 965 970 975	3347
aac ggt gac ctg tca gcc aca gaa gtg agc aag cac aag gtc ccc atg Asn Gly Asp Leu Ser Ala Thr Glu Val Ser Lys His Lys Val Pro Met 980 985 990	3395
ccc agc cta att gct gag aat aac tgt cgg tgt cct ggg cca gtc agg Pro Ser Leu Ile Ala Glu Asn Asn Cys Arg Cys Pro Gly Pro Val Arg 995 1000 1005	3443
gga ggc aaa gaa ccg ggt ccc gtg ttg gca gtg agc acc gag gag ggg Gly Gly Lys Glu Pro Gly Pro Val Leu Ala Val Ser Thr Glu Glu Gly 1010 1015 1020	3491
cac aac ggg cca tca gtc cac aag ccc tct gca ggg caa ggc cat cca His Asn Gly Pro Ser Val His Lys Pro Ser Ala Gly Gln Gly His Pro 1025 1030 1035 1040	3539
agt gct gtt tgt gcg gaa aaa gaa gag aag cat ggc aag gag tgc ccc Ser Ala Val Cys Ala Glu Lys Glu Glu Lys His Gly Lys Glu Cys Pro 1045 1050 1055	3587
gaa ata gga cca ttt gca gga aga gga cag aaa gag agc act tta cac Glu Ile Gly Pro Phe Ala Gly Arg Gly Gln Lys Glu Ser Thr Leu His 1060 1065 1070	3635
ctc ata aat gca gaa gag aag aat gta ttg ttg aac tcc ctt cag aaa Leu Ile Asn Ala Glu Glu Lys Asn Val Leu Leu Asn Ser Leu Gln Lys 1075 1080 1085	3683
gaa gat aag agc cca gag aca ggg aca gca ggg ggc agt agc aca gca Glu Asp Lys Ser Pro Glu Thr Gly Thr Ala Gly Gly Ser Ser Thr Ala 1090 1095 1100	3731
agt tat tca gca gga agg ggc tta gag ggg aat gct aac tca cct gcc Ser Tyr Ser Ala Gly Arg Gly Leu Glu Gly Asn Ala Asn Ser Pro Ala 1105 1110 1115 1120	3779
cac ctg aga gga cca gaa cag ccg tct ggg cag acg gct aag gat ccc His Leu Arg Gly Pro Glu Gln Pro Ser Gly Gln Thr Ala Lys Asp Pro 1125 1130 1135	3827
tct gtc agc att cgc tat ttg gca gca gta aac acc ggt gct ata aaa Ser Val Ser Ile Arg Tyr Leu Ala Ala Val Asn Thr Gly Ala Ile Lys 1140 1145 1150	3875

gct gat gac atg cca cct gtt caa ggg acc gtg gct gag cat tcc ttt Ala Asp Asp Met Pro Pro Val Gln Gly Thr Val Ala Glu His Ser Phe 1155 1160 1165	3923
ctt cct gcc gag cag cag ggg tct gaa gac aac ttg aaa acc agt acc Leu Pro Ala Glu Gln Gln Gly Ser Glu Asp Asn Leu Lys Thr Ser Thr 1170 1175 1180	3971
acc aaa tgt att act ggc caa gaa tca aaa att gct cct tcc cac aca Thr Lys Cys Ile Thr Gly Gln Glu Ser Lys Ile Ala Pro Ser His Thr 1185 1190 1195 1200	4019
atg atc cct cca gct act tac agt gta gct ctg ttg gct cct aaa tgt Met Ile Pro Pro Ala Thr Tyr Ser Val Ala Leu Leu Ala Pro Lys Cys 1205 1210 1215	4067
gag cag gac ttg act ata aag aat gat tat agt ggc aaa tgg act gat Glu Gln Asp Leu Thr Ile Lys Asn Asp Tyr Ser Gly Lys Trp Thr Asp 1220 1225 1230	4115
caa gca tct gct gag aaa aca gga gat gat aac agc aca agg aaa tca Gln Ala Ser Ala Glu Lys Thr Gly Asp Asp Asn Ser Thr Arg Lys Ser 1235 1240 1245	4163
ttc cct gag gaa gga gac ata atg gtt act gtg tct tct gaa gaa aat Phe Pro Glu Glu Gly Asp Ile Met Val Thr Val Ser Ser Glu Glu Asn 1250 1255 1260	4211
gtg tgt gac ata ggc aat gaa gag tct cca ttg aat gtt ttg gga gga Val Cys Asp Ile Gly Asn Glu Glu Ser Pro Leu Asn Val Leu Gly Gly 1265 1270 1275 1280	4259
ttg aaa ctg aaa gcc aac ttg aaa atg gag gct tat gtg cct tca gag Leu Lys Leu Lys Ala Asn Leu Lys Met Glu Ala Tyr Val Pro Ser Glu 1285 1290 1295	4307
gaa gag aaa aat ggt gaa att ctg gca cca cca gaa agt ctg tgt ggg Glu Glu Lys Asn Gly Glu Ile Leu Ala Pro Pro Glu Ser Leu Cys Gly 1300 1305 1310	4355
gga aag cca agt gga ata gct gaa ctc cag agg gag cct ttg ttg gtg Gly Lys Pro Ser Gly Ile Ala Glu Leu Gln Arg Glu Pro Leu Leu Val 1315 1320 1325	4403
aat gaa tca cta aat gtt gaa aat tca ggc ttc aga aca aat gaa gaa Asn Glu Ser Leu Asn Val Glu Asn Ser Gly Phe Arg Thr Asn Glu Glu 1330 1335 1340	4451
att cat agc gaa tct tat aac aaa gga gag ata tcc agt ggt aga aaa Ile His Ser Glu Ser Tyr Asn Lys Gly Glu Ile Ser Ser Gly Arg Lys 1345 1350 1355 1360	4499
gac aac gca gaa gcc ata agc ggt cac agt gtt gaa gca gat cct aaa Asp Asn Ala Glu Ala Ile Ser Gly His Ser Val Glu Ala Asp Pro Lys 1365 1370 1375	4547
gag gtt gaa gag gaa gaa agg cat atg cct aaa aga aaa aga aag cag Glu Val Glu Glu Glu Glu Arg His Met Pro Lys Arg Lys Arg Lys Gln 1380 1385 1390	4595
cat tat ctc tct tca gaa gat gaa cca gat gat aat cca gat gtc ctg His Tyr Leu Ser Ser Glu Asp Glu Pro Asp Asp Asn Pro Asp Val Leu 1395 1400 1405	4643

gat tcc aga ata gaa aca gca caa agg cag tgt cct gaa acg gag cca Asp Ser Arg Ile Glu Thr Ala Gln Arg Gln Cys Pro Glu Thr Glu Pro 1410 1415 1420	4691
cat gac aca aag gaa gag aac tcc aga gat ttg gaa gaa tta cct aaa His Asp Thr Lys Glu Glu Asn Ser Arg Asp Leu Glu Glu Leu Pro Lys 1425 1430 1435 1440	4739
acc agt tct gag gca aat agc act acc tca agg gtc atg gaa gaa aaa Thr Ser Ser Glu Ala Asn Ser Thr Thr Ser Arg Val Met Glu Glu Lys 1445 1450 1455	4787
gat gaa tat agc agc agt gaa act act ggt gaa aag cca gag cag aac Asp Glu Tyr Ser Ser Ser Glu Thr Thr Gly Glu Lys Pro Glu Gln Asn 1460 1465 1470	4835
gat gat gac acc ata aaa tct cag gag gaa gat cag cca ata att att Asp Asp Asp Thr Ile Lys Ser Gln Glu Glu Asp Gln Pro Ile Ile Ile 1475 1480 1485	4883
aaa agg aaa aga gga aga cct cgc aaa tac cct gta gaa aca acg tta Lys Arg Lys Arg Gly Arg Pro Arg Lys Tyr Pro Val Glu Thr Thr Leu 1490 1495 1500	4931
aaa atg aaa gac gac tcc aaa aca gat act ggc att gtc act gta gaa Lys Met Lys Asp Asp Ser Lys Thr Asp Thr Gly Ile Val Thr Val Glu 1505 1510 1515 1520	4979
caa tct cca tct agc agc aaa ctg aaa gta atg caa aca gat gaa tcc Gln Ser Pro Ser Ser Ser Lys Leu Lys Val Met Gln Thr Asp Glu Ser 1525 1530 1535	5027
aat aaa gaa aca gct aac cta caa gaa aga agt ata agc aat gat gat Asn Lys Glu Thr Ala Asn Leu Gln Glu Arg Ser Ile Ser Asn Asp Asp 1540 1545 1550	5075
ggt gaa gaa aaa ata gta aca agt gtg cgt cgg aga gga aga aaa ccc Gly Glu Glu Lys Ile Val Thr Ser Val Arg Arg Arg Gly Arg Lys Pro 1555 1560 1565	5123
aaa cgt tct ctc act gta tca gat gat gct gaa tcc tca gag cca gaa Lys Arg Ser Leu Thr Val Ser Asp Asp Ala Glu Ser Ser Glu Pro Glu 1570 1575 1580	5171
aga aaa cgc cag aaa tca gtt tct gat cca gtg gag gac aag aaa gag Arg Lys Arg Gln Lys Ser Val Ser Asp Pro Val Glu Asp Lys Lys Glu 1585 1590 1595 1600	5219
cag gag tct gat gag gaa gag gaa gaa gag gaa gag gac gag cct tca Gln Glu Ser Asp Glu Glu Glu Glu Glu Glu Glu Glu Asp Glu Pro Ser 1605 1610 1615	5267
gga gcc acc aca aga tcc acc acc aga tca gag gct cag aga tca aag Gly Ala Thr Thr Arg Ser Thr Thr Arg Ser Glu Ala Gln Arg Ser Lys 1620 1625 1630	5315
aca cag ctc tcc cct tct atc aag cgc aag aga gaa gtc agc cct cct Thr Gln Leu Ser Pro Ser Ile Lys Arg Lys Arg Glu Val Ser Pro Pro 1635 1640 1645	5363
ggg gcc cga aca aga ggc cag caa agg gtg gag gaa gcc cct gtg aaa Gly Ala Arg Thr Arg Gly Gln Gln Arg Val Glu Glu Ala Pro Val Lys 1650 1655 1660	5411

aaa gcg aag cga taa tcctgaccac tgctgcccta ggcttatgga ggaacacggt 5466
 Lys Ala Lys Arg *
 1665
 ggagaggaaa gagacatgcc ttggtggcca taggcttctc ttttaaccagg aaaaagatat 5526
 gcatgtgctg taagtcccta ggtgcaagct ttttcttggt atgtttttaa cagctttata 5586
 aactattggt catagaagat attatgtaca tttatttcag ataaaggaca ataagtttac 5646
 tttgtatctg aactcaaaac aaagtagttg tatattttaa cattcaaaat tgggatttcc 5706
 caatgtgaca catcatgaat gcaaaccctt ccagcccatc agacgccagg ctgcctactg 5766
 gtaatctgtg tatagtatat aaacatgtaa aaataggttg tattttactc tatgtatgat 5826
 gctaataaat gaacacttta tttattttac agagaaaact tatctgtgaa ctttactata 5886
 tatctgttta ttttacttta tttttttttt aaataaaaag ggttttaaat gctatgcagt 5946
 cattagtaga aaatttttta ggactctgcc tgctctgtaa ctatcttaat atgatctggc 6006
 agaaactcgc atgtatccaa gtaaagtagt ttagctaaag aaaggttctt cattgctttt 6066
 ctggtcacag ttgtggctct gttttttaag aatgtaactt gtttttagat tatacttgca 6126
 tctgtgactt tactaccagc cacgttgaca caaacaggt tctggttcag gtaaagttgc 6186
 gtcagtcacc tgcagcagaa atccctcttc attcctcttc tctgtgttca ttccctctct 6246
 gtgctgttct gaagcttcta ccaatactct ttccatattg tctttttcag tgaagagaaa 6306
 tgcattcaag attaggtccc tcctgtctat ccagtttcag gattttatgt tgttttatac 6366
 acagttatth cagtatagaa actggcttta ttgccaagtg tttttttaa catgttttaa 6426
 ctctcatatg agcaaaactgt ccaacttcag tttttcataa gattaaactt cttacgatca 6486
 aatttgctc ttgcaatgat gtgatgagtt gccaaataat tgagattatt ttaaaatggt 6546
 ttgttcatat tcttgtttta taattaaaat ttacattcag tgtgtatggg tttttttttt 6606
 tattttgact cttaatgtaa ggtggatatt tctgtcattt tacatgggtt cttactgaga 6666
 ttttatatat aaattataaa atgtttacca aaaaaaaaaa a 6707

<210> 963

<211> 6848

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (420)..(5567)

<400> 963

actcgcgttc ggaaaatgat agggtagaca agaatttgaa aaacacttct gctgaagaac 60
 atgttgctca aggagatgcc actcttgaa attccacaaa tttagactcc tcaccatcct 120
 taagttcagt gactgtgtg cctctgaggg aatcgtatga tccagatgta attcctctgt 180

ttgacaaaag aactgttttg gaaggtagca cagccagcac ctcccctgcg gatcactctg	240
ctctccctaa ccaaagtctg actgttaggg aatcagaagt ccttaagaca agtgacagca	300
aagaaggtgg tgaaggtttc acagtagata caccagcaaa agcaagcatc actagcaaaa	360
gacacattcc agaagctcac caggctactt tattggatgg taaacaagga aaggtaatc	419
atg cct ctt gga agt aag tta acg ggc gtg att gtg gaa aat gag aat	467
Met Pro Leu Gly Ser Lys Leu Thr Gly Val Ile Val Glu Asn Glu Asn	
1 5 10 15	
att acc aaa gaa ggt ggc tta gtg gac atg gcc aag aaa gaa aat gac	515
Ile Thr Lys Glu Gly Gly Leu Val Asp Met Ala Lys Lys Glu Asn Asp	
20 25 30	
tta aat gca gag ccc aat tta aag cag aca att aaa gca aca gta gag	563
Leu Asn Ala Glu Pro Asn Leu Lys Gln Thr Ile Lys Ala Thr Val Glu	
35 40 45	
aat ggc aag aag gat ggc att gct gtt gat cat gtt gta ggc ctg aat	611
Asn Gly Lys Lys Asp Gly Ile Ala Val Asp His Val Val Gly Leu Asn	
50 55 60	
aca gaa aaa tat gct gaa act gtc aaa ctt aag cat aaa aga agc cca	659
Thr Glu Lys Tyr Ala Glu Thr Val Lys Leu Lys His Lys Arg Ser Pro	
65 70 75 80	
ggc aaa gta aaa gac ata tca att gat gtt gaa aga agg aat gaa aac	707
Gly Lys Val Lys Asp Ile Ser Ile Asp Val Glu Arg Arg Asn Glu Asn	
85 90 95	
agt gag gta gac acc agt gct gga agt ggc tct gca ccc tct gtt tta	755
Ser Glu Val Asp Thr Ser Ala Gly Ser Gly Ser Ala Pro Ser Val Leu	
100 105 110	
cac caa agg aac gga caa act gag gat gtg gca act ggg cct agg aga	803
His Gln Arg Asn Gly Gln Thr Glu Asp Val Ala Thr Gly Pro Arg Arg	
115 120 125	
gca gaa aag act tct gtt gcc act agt act gaa ggg aag gac aaa gat	851
Ala Glu Lys Thr Ser Val Ala Thr Ser Thr Glu Gly Lys Asp Lys Asp	
130 135 140	
gtc acc tta agt cca gtg aag gct ggg cct gcc aca acc act tct tca	899
Val Thr Leu Ser Pro Val Lys Ala Gly Pro Ala Thr Thr Thr Ser Ser	
145 150 155 160	
gaa aca aga caa agt gag gtg gct ttg cct tgc acc agc att gag gca	947
Glu Thr Arg Gln Ser Glu Val Ala Leu Pro Cys Thr Ser Ile Glu Ala	
165 170 175	
gat gaa ggc ctc ata ata gga aca cat tcc aga aat aat cct ctt cat	995
Asp Glu Gly Leu Ile Ile Gly Thr His Ser Arg Asn Asn Pro Leu His	
180 185 190	
gtt ggt gca gaa gcc agt gaa tgc act gtt ttt gct gca gct gaa gaa	1043
Val Gly Ala Glu Ala Ser Glu Cys Thr Val Phe Ala Ala Ala Glu Glu	
195 200 205	
ggc ggg gct gtt gtc aca gag gga ttt gct gaa agt gaa acc ttc ctc	1091
Gly Gly Ala Val Val Thr Glu Gly Phe Ala Glu Ser Glu Thr Phe Leu	
210 215 220	

aca agc act aag gaa ggg gaa agt ggg gag tgt gct gtg gct gaa tct	1139
Thr Ser Thr Lys Glu Gly Glu Ser Gly Glu Cys Ala Val Ala Glu Ser	
225 230 235 240	
gag gac aga gca gca gac cta ctg gct gtg cat gca gtt aaa atc gaa	1187
Glu Asp Arg Ala Ala Asp Leu Leu Ala Val His Ala Val Lys Ile Glu	
245 250 255	
gcc aat gta aat agc gtt gtg aca gag gaa aag gat gat gct gta acc	1235
Ala Asn Val Asn Ser Val Val Thr Glu Glu Lys Asp Asp Ala Val Thr	
260 265 270	
agt gca ggc tct gaa gaa aaa tgt gat ggt tct tta agt aga gac tca	1283
Ser Ala Gly Ser Glu Glu Lys Cys Asp Gly Ser Leu Ser Arg Asp Ser	
275 280 285	
gaa ata gtt gaa gga act att act ttt att agt gaa gtt gaa agt gat	1331
Glu Ile Val Glu Gly Thr Ile Thr Phe Ile Ser Glu Val Glu Ser Asp	
290 295 300	
gga gca gtt aca agt gct gga aca gag ata aga gca gga tct ata agc	1379
Gly Ala Val Thr Ser Ala Gly Thr Glu Ile Arg Ala Gly Ser Ile Ser	
305 310 315 320	
agt gaa gag gtg gat ggc tcc cag gga aat atg atg aga atg ggt ccc	1427
Ser Glu Glu Val Asp Gly Ser Gln Gly Asn Met Met Arg Met Gly Pro	
325 330 335	
aaa aaa gaa aca gag ggc act gtg aca tgt aca gga gca gaa ggc aga	1475
Lys Lys Glu Thr Glu Gly Thr Val Thr Cys Thr Gly Ala Glu Gly Arg	
340 345 350	
agt gat aac ttt gtg atc tgc tca gta act gga gca ggg ccc cgg gag	1523
Ser Asp Asn Phe Val Ile Cys Ser Val Thr Gly Ala Gly Pro Arg Glu	
355 360 365	
gaa cgc atg gtt aca ggt gca ggt gtt gtc ctg gga gat aat gat gca	1571
Glu Arg Met Val Thr Gly Ala Gly Val Val Leu Gly Asp Asn Asp Ala	
370 375 380	
cca cca gga aca agt gcc agc caa gaa gga gat ggt tct gtg aat gat	1619
Pro Pro Gly Thr Ser Ala Ser Gln Glu Gly Asp Gly Ser Val Asn Asp	
385 390 395 400	
ggt aca gaa ggt gag agt gca gtc acc agc acg ggg ata aca gaa gat	1667
Gly Thr Glu Gly Glu Ser Ala Val Thr Ser Thr Gly Ile Thr Glu Asp	
405 410 415	
gga gag ggg cca gca agt tgc aca ggt tca gaa gat agc agc gaa ggc	1715
Gly Glu Gly Pro Ala Ser Cys Thr Gly Ser Glu Asp Ser Ser Glu Gly	
420 425 430	
ttt gct ata agt tot gaa tcg gaa gaa aat gga gag agt gca atg gac	1763
Phe Ala Ile Ser Ser Glu Ser Glu Glu Asn Gly Glu Ser Ala Met Asp	
435 440 445	
agc aca gtg gcc aaa gaa ggc act aat gta cca tta gtt gct gct ggt	1811
Ser Thr Val Ala Lys Glu Gly Thr Asn Val Pro Leu Val Ala Ala Gly	
450 455 460	
cct tgt gat gat gaa ggc att gtg act agc aca ggc gca aaa gag gaa	1859
Pro Cys Asp Asp Glu Gly Ile Val Thr Ser Thr Gly Ala Lys Glu Glu	
465 470 475 480	

gac gag gaa ggg gag gat gtt gtg act agt act gga aga gga aat gaa Asp Glu Glu Gly Glu Asp Val Val Thr Ser Thr Gly Arg Gly Asn Glu 485 490 495	1907
att ggg cat gct tca act tgt aca ggg tta gga gaa gaa agt gaa ggg Ile Gly His Ala Ser Thr Cys Thr Gly Leu Gly Glu Ser Glu Gly 500 505 510	1955
gtc ttg att tgt gaa agt gca gaa ggg gac agt cag att ggt act gtg Val Leu Ile Cys Glu Ser Ala Glu Gly Asp Ser Gln Ile Gly Thr Val 515 520 525	2003
gta gag cat gtg gaa gct gag gct gga gct gcc atc atg aat gca aat Val Glu His Val Glu Ala Glu Ala Gly Ala Ala Ile Met Asn Ala Asn 530 535 540	2051
gaa aat aat gtt gac agc atg agt ggc aca gag aaa gga agt aaa gac Glu Asn Asn Val Asp Ser Met Ser Gly Thr Glu Lys Gly Ser Lys Asp 545 550 555 560	2099
aca gat atc tgc tcc agt gca aaa ggg att gta gaa agc agt gtg acc Thr Asp Ile Cys Ser Ser Ala Lys Gly Ile Val Glu Ser Ser Val Thr 565 570 575	2147
agt gca gtc tca gga aag gat gaa gtg aca cca gtt cca gga ggt tgt Ser Ala Val Ser Gly Lys Asp Glu Val Thr Pro Val Pro Gly Gly Cys 580 585 590	2195
gag ggt cct atg act agt gct gca tct gat caa agt gac agt cag ctc Glu Gly Pro Met Thr Ser Ala Ala Ser Asp Gln Ser Asp Ser Gln Leu 595 600 605	2243
gaa aaa gtt gaa gat acc act att tcc act ggc ctg gtc ggg ggt agt Glu Lys Val Glu Asp Thr Ile Ser Thr Gly Leu Val Gly Gly Ser 610 615 620	2291
tac gat gtt ctt gta tct ggt gaa gtc cca gaa tgt gaa gtt gct cac Tyr Asp Val Leu Val Ser Gly Glu Val Pro Glu Cys Glu Val Ala His 625 630 635 640	2339
aca tca cca agt gaa aaa gaa gat gag gac atc atc acc tct gta gaa Thr Ser Pro Ser Glu Lys Glu Asp Glu Asp Ile Ile Thr Ser Val Glu 645 650 655	2387
aat gaa gag tgt gat ggt ctc atg gca act aca gcc agt ggt gat att Asn Glu Glu Cys Asp Gly Leu Met Ala Thr Thr Ala Ser Gly Asp Ile 660 665 670	2435
acc aac cag aat agc tta gca ggg ggt aaa aat caa ggc aaa gtt ttg Thr Asn Gln Asn Ser Leu Ala Gly Gly Lys Asn Gln Gly Lys Val Leu 675 680 685	2483
att att tcc acc agt acc aca aat gat tac acc cct cag gta agc gca Ile Ile Ser Thr Ser Thr Asn Asp Tyr Thr Pro Gln Val Ser Ala 690 695 700	2531
att aca gat gtg gaa gga ggt ctc tca gat gct ctg aga act gaa gaa Ile Thr Asp Val Glu Gly Gly Leu Ser Asp Ala Leu Arg Thr Glu Glu 705 710 715 720	2579
aat atg gaa ggt acc aga gta acc aca gaa gaa ttt gag gcc ccc atg Asn Met Glu Gly Thr Arg Val Thr Thr Glu Glu Phe Glu Ala Pro Met 725 730 735	2627

ccc agt gca gtc tca gga gat gac agc caa ctc act gcc agc aga agt	2675
Pro Ser Ala Val Ser Gly Asp Asp Ser Gln Leu Thr Ala Ser Arg Ser	
740 745 750	
 gaa gag aaa gat gag tgt gcc atg att tcc aca agc ata ggg gaa gaa	2723
Glu Glu Lys Asp Glu Cys Ala Met Ile Ser Thr Ser Ile Gly Glu Glu	
755 760 765	
 ttc gaa ttg cct atc tcc agt gca aca acc atc aag tgt gct gaa agt	2771
Phe Glu Leu Pro Ile Ser Ser Ala Thr Thr Ile Lys Cys Ala Glu Ser	
770 775 780	
 ctt cag ccg gtt gct gca gca gtg gaa gaa agg gct aca ggt cca gtc	2819
Leu Gln Pro Val Ala Ala Val Glu Glu Arg Ala Thr Gly Pro Val	
785 790 795 800	
 ttg ata agc acc gcc gac ttt gag ggg cct atg ccc agt gcg ccc cca	2867
Leu Ile Ser Thr Ala Asp Phe Glu Gly Pro Met Pro Ser Ala Pro Pro	
805 810 815	
 gaa gct gaa agt cct ctt gcc tca acc agc aag gag gag aag gat gaa	2915
Glu Ala Glu Ser Pro Leu Ala Ser Thr Ser Lys Glu Glu Lys Asp Glu	
820 825 830	
 tgt gct ctc att tcc act agc ata gca gaa gaa tgt gag gct tct gtt	2963
Cys Ala Leu Ile Ser Thr Ser Ile Ala Glu Glu Cys Glu Ala Ser Val	
835 840 845	
 tcc ggt gta gtt gtt gaa agt gaa aat gag cga gct ggc aca gtc atg	3011
Ser Gly Val Val Val Glu Ser Glu Asn Glu Arg Ala Gly Thr Val Met	
850 855 860	
 gaa gaa aaa gac ggg agt ggc atc atc tct acg agc tcg gtg gaa gac	3059
Glu Glu Lys Asp Gly Ser Gly Ile Ile Ser Thr Ser Ser Val Glu Asp	
865 870 875 880	
 tgt gag ggc cca gtg tcc agt gct gtc cct caa gag gaa ggc gac ccc	3107
Cys Glu Gly Pro Val Ser Ser Ala Val Pro Gln Glu Glu Gly Asp Pro	
885 890 895	
 tca gtc aca cca gcg gaa gag atg ggt gac acc gcc atg att tcc aca	3155
Ser Val Thr Pro Ala Glu Glu Met Gly Asp Thr Ala Met Ile Ser Thr	
900 905 910	
 agc acc tct gaa ggg tgt gaa gca gtc atg att ggt gct gtc ctc cag	3203
Ser Thr Ser Glu Gly Cys Glu Ala Val Met Ile Gly Ala Val Leu Gln	
915 920 925	
 gat gaa gat cgg ctc acc atc aca aga gta gaa gac ttg agc gat gct	3251
Asp Glu Asp Arg Leu Thr Ile Thr Arg Val Glu Asp Leu Ser Asp Ala	
930 935 940	
 gcc atc atc tcc acc agc aca gca gaa tgt atg cca att tcc gcc agc	3299
Ala Ile Ile Ser Thr Ser Thr Ala Glu Cys Met Pro Ile Ser Ala Ser	
945 950 955 960	
 att gac aga cat gaa gag aat cag ctg act gca gac aac cca gaa ggg	3347
Ile Asp Arg His Glu Glu Asn Gln Leu Thr Ala Asp Asn Pro Glu Gly	
965 970 975	
 aac ggt gac ctg tca gcc aca gaa gtg agc aag cac aag gtc ccc atg	3395
Asn Gly Asp Leu Ser Ala Thr Glu Val Ser Lys His Lys Val Pro Met	
980 985 990	

ccc agc cta att gct gag aat aac tgt cgg tgt cct ggg cca gtc agg	3443
Pro Ser Leu Ile Ala Glu Asn Asn Cys Arg Cys Pro Gly Pro Val Arg	
995 1000 1005	
gga ggc aaa gaa ccg ggt ccc gtg ttg gca gtg agc acc gag gag ggg	3491
Gly Gly Lys Glu Pro Gly Pro Val Leu Ala Val Ser Thr Glu Glu Gly	
1010 1015 1020	
cac aac ggg cca tca gtc cac aag ccc tct gca ggg caa ggc cat cca	3539
His Asn Gly Pro Ser Val His Lys Pro Ser Ala Gly Gln Gly His Pro	
1025 1030 1035 1040	
agt gct gtt tgt gcg gaa aaa gaa gag aag cat ggc aag gag tgc ccc	3587
Ser Ala Val Cys Ala Glu Lys Glu Glu Lys His Gly Lys Glu Cys Pro	
1045 1050 1055	
gaa ata gga cca ttt gca gga aga gga cag aaa gag agc act tta cac	3635
Glu Ile Gly Pro Phe Ala Gly Arg Gly Gln Lys Glu Ser Thr Leu His	
1060 1065 1070	
ctc ata aat gca gaa gag aag aat gta ttg ttg aac tcc ctt cag aaa	3683
Leu Ile Asn Ala Glu Glu Lys Asn Val Leu Leu Asn Ser Leu Gln Lys	
1075 1080 1085	
gaa gat aag agc cca gag aca ggg aca gca ggg ggc agt agc aca gca	3731
Glu Asp Lys Ser Pro Glu Thr Gly Thr Ala Gly Gly Ser Ser Thr Ala	
1090 1095 1100	
agt tat tca gca gga agg ggc tta gag ggg aat gct aac tca cct gcc	3779
Ser Tyr Ser Ala Gly Arg Gly Leu Glu Gly Asn Ala Asn Ser Pro Ala	
1105 1110 1115 1120	
cac ctg aga gga cca gaa cag ccg tct ggg cag acg gct aag gat ccc	3827
His Leu Arg Gly Pro Glu Gln Pro Ser Gly Gln Thr Ala Lys Asp Pro	
1125 1130 1135	
tct gtc agc att cgc tat ttg gca gca gta aac acc ggt gct ata aaa	3875
Ser Val Ser Ile Arg Tyr Leu Ala Ala Val Asn Thr Gly Ala Ile Lys	
1140 1145 1150	
gct gat gac atg cca cct gtt caa ggg acc gtg gct gag cat tcc ttt	3923
Ala Asp Asp Met Pro Pro Val Gln Gly Thr Val Ala Glu His Ser Phe	
1155 1160 1165	
ctt cct gcc gag cag cag ggg tct gaa gac aac ttg aaa acc agt acc	3971
Leu Pro Ala Glu Gln Gln Gly Ser Glu Asp Asn Leu Lys Thr Ser Thr	
1170 1175 1180	
acc aaa tgt att act ggc caa gaa tca aaa att gct cct tcc cac aca	4019
Thr Lys Cys Ile Thr Gly Gln Glu Ser Lys Ile Ala Pro Ser His Thr	
1185 1190 1195 1200	
atg atc cct cca gct act tac agt gta gct ctg ttg gct cct aaa tgt	4067
Met Ile Pro Pro Ala Thr Tyr Ser Val Ala Leu Leu Ala Pro Lys Cys	
1205 1210 1215	
gag cag gac ttg act ata aag aat gat tat agt ggc aaa tgg act gat	4115
Glu Gln Asp Leu Thr Ile Lys Asn Asp Tyr Ser Gly Lys Trp Thr Asp	
1220 1225 1230	
caa gca tct gct gag aaa aca gga gat gat aac agc aca agg aaa tca	4163
Gln Ala Ser Ala Glu Lys Thr Gly Asp Asp Asn Ser Thr Arg Lys Ser	
1235 1240 1245	

ttc cct gag gaa gga gac ata atg gtt act gtg tct tct gaa gaa aat	4211
Phe Pro Glu Glu Gly Asp Ile Met Val Thr Val Ser Ser Glu Glu Asn	
1250 1255 1260	
gtg tgt gac ata ggc aat gaa gag tct cca ttg aat gtt ttg gga gga	4259
Val Cys Asp Ile Gly Asn Glu Glu Ser Pro Leu Asn Val Leu Gly Gly	
1265 1270 1275 1280	
ttg aaa ctg aaa gcc aac ttg aaa atg gag gct tat gtg cct tca gag	4307
Leu Lys Leu Lys Ala Asn Leu Lys Met Glu Ala Tyr Val Pro Ser Glu	
1285 1290 1295	
gaa gag aaa aat ggt gaa att ctg gca cca cca gaa agt ctg tgt ggg	4355
Glu Glu Lys Asn Gly Glu Ile Leu Ala Pro Pro Glu Ser Leu Cys Gly	
1300 1305 1310	
gga aag cca agt gga ata gct gaa ctc cag agg gag cct ttg ttg gtg	4403
Gly Lys Pro Ser Gly Ile Ala Glu Leu Gln Arg Glu Pro Leu Leu Val	
1315 1320 1325	
aat gaa tca cta aat gtt gaa aat tca ggc ttc aga aca aat gaa gaa	4451
Asn Glu Ser Leu Asn Val Glu Asn Ser Gly Phe Arg Thr Asn Glu Glu	
1330 1335 1340	
att cat agc gaa tct tat aac aaa gga gag ata tcc agt ggt aga aaa	4499
Ile His Ser Glu Ser Tyr Asn Lys Gly Glu Ile Ser Ser Gly Arg Lys	
1345 1350 1355 1360	
gac aac gca gaa gcc ata agc ggt cac agt gtt gaa gca gat cct aaa	4547
Asp Asn Ala Glu Ala Ile Ser Gly His Ser Val Glu Ala Asp Pro Lys	
1365 1370 1375	
gag gtt gaa gag gaa gaa agg cat atg cct aaa aga aaa aga aag cag	4595
Glu Val Glu Glu Glu Glu Arg His Met Pro Lys Arg Lys Arg Lys Gln	
1380 1385 1390	
cat tat ctc tct tca gaa gat gaa cca gat gat aat cca gat gtc ctg	4643
His Tyr Leu Ser Ser Glu Asp Glu Pro Asp Asp Asn Pro Asp Val Leu	
1395 1400 1405	
gat tcc aga ata gaa aca gca caa agg cag tgt cct gaa acg gag cca	4691
Asp Ser Arg Ile Glu Thr Ala Gln Arg Gln Cys Pro Glu Thr Glu Pro	
1410 1415 1420	
cat gac aca aag gaa gag aac tcc aga gat ttg gaa gaa tta cct aaa	4739
His Asp Thr Lys Glu Glu Asn Ser Arg Asp Leu Glu Glu Leu Pro Lys	
1425 1430 1435 1440	
acc agt tct gag gca aat agc act acc tca agg gtc atg gaa gaa aaa	4787
Thr Ser Ser Glu Ala Asn Ser Thr Thr Ser Arg Val Met Glu Glu Lys	
1445 1450 1455	
gat gaa tat agc agc agt gaa act act ggt gaa aag cca gag cag aac	4835
Asp Glu Tyr Ser Ser Ser Glu Thr Thr Gly Glu Lys Pro Glu Gln Asn	
1460 1465 1470	
gat gat gac acc ata aaa tct cag gag gaa gat cag cca ata att att	4883
Asp Asp Asp Thr Ile Lys Ser Gln Glu Glu Asp Gln Pro Ile Ile Ile	
1475 1480 1485	
aaa agg aaa aga gga aga cct cgc aaa tac cct gta gaa aca acg tta	4931
Lys Arg Lys Arg Gly Arg Pro Arg Lys Tyr Pro Val Glu Thr Thr Leu	
1490 1495 1500	

aaa atg aaa gac gac tcc aaa aca gat act ggc att gtc act gta gaa	4979
Lys Met Lys Asp Asp Ser Lys Thr Asp Thr Gly Ile Val Thr Val Glu	
1505 1510 1515 1520	
caa tct cca tct agc agc aaa ctg aaa gta atg caa aca gat gaa tcc	5027
Gln Ser Pro Ser Ser Ser Lys Leu Lys Val Met Gln Thr Asp Glu Ser	
1525 1530 1535	
aat aaa gaa aca gct aac cta caa gaa aga agt ata agc aat gat gat	5075
Asn Lys Glu Thr Ala Asn Leu Gln Glu Arg Ser Ile Ser Asn Asp Asp	
1540 1545 1550	
ggt gaa gaa aaa ata gta aca agt gtg cgt cgg aga gga aga aaa ccc	5123
Gly Glu Glu Lys Ile Val Thr Ser Val Arg Arg Gly Arg Lys Pro	
1555 1560 1565	
aaa cgt tct ctc act gta tca gat gat gct gaa tcc tca gag cca gaa	5171
Lys Arg Ser Leu Thr Val Ser Asp Asp Ala Glu Ser Ser Glu Pro Glu	
1570 1575 1580	
aga aaa cgc cag aaa tca gtt tct gat cca gtg gag gac aag aaa gag	5219
Arg Lys Arg Gln Lys Ser Val Ser Asp Pro Val Glu Asp Lys Lys Glu	
1585 1590 1595 1600	
cag gag tct gat gag gaa gag gaa gaa gag gaa gag gac gag cct tca	5267
Gln Glu Ser Asp Glu Glu Glu Glu Glu Glu Glu Asp Glu Pro Ser	
1605 1610 1615	
gga gcc acc aca aga tcc acc acc aga tca gag gct cag aga aag caa	5315
Gly Ala Thr Thr Arg Ser Thr Thr Arg Ser Glu Ala Gln Arg Lys Gln	
1620 1625 1630	
cat agc aag cca tct gca cgt gca aca tcc aaa ctt ggc agc cca gac	5363
His Ser Lys Pro Ser Ala Arg Ala Thr Ser Lys Leu Gly Ser Pro Asp	
1635 1640 1645	
aca gtt tct cct aga aat cgc caa aaa tta gca aaa gag aag tta cct	5411
Thr Val Ser Pro Arg Asn Arg Gln Lys Leu Ala Lys Glu Lys Leu Pro	
1650 1655 1660	
acc agc gaa aaa gtt agt aac tct ccc cca tta gga aga tca aag aca	5459
Thr Ser Glu Lys Val Ser Asn Ser Pro Pro Leu Gly Arg Ser Lys Thr	
1665 1670 1675 1680	
cag ctc tcc cct tct atc aag cgc aag aga gaa gtc agc cct cct ggg	5507
Gln Leu Ser Pro Ser Ile Lys Arg Lys Arg Glu Val Ser Pro Pro Gly	
1685 1690 1695	
gcc cga aca aga ggc cag caa agg gtg gag gaa gcc cct gtg aaa aaa	5555
Ala Arg Thr Arg Gly Gln Gln Arg Val Glu Glu Ala Pro Val Lys Lys	
1700 1705 1710	
gcg aag cga taa tcc tgaccactgc tgccctaggc ttatggagga acacgggtgga	5610
Ala Lys Arg *	
1715	
gaggaaagag acatgccttg gtggccatag gcttctcttt aaccaggaaa aagatatgca	5670
tgtgctgtaa gtccttaggt gcaagctttt tcttggtatg ttttaaacag ctttataaac	5730
tattgttcat agaagatatt atgtacattt atttcagata aaggacaata agtttacttt	5790
gtatctgaac tcaaaacaaa gtagttgtat attttaacat tcaaaattgg gatttcccaa	5850

```

tgtgacacat catgaatgca aacccctcca gcccatcaga cgccaggctg cctactggta 5910
atctgtgtat agtatataaa catgtaaaaa taggttgtat tttactctat gtatgatgct 5970
aatcaatgaa cactttattt atttttacaga gaaaacttat ctgtgaactt tactatatat 6030
ctgtttattt tactttattt tttttttaaa taaaaagggg tttaaatgct atgcagtcac 6090
tagtagaaaa ttttttagga ctctgcctgc tctgtaacta tcttaatatg atctggcaga 6150
aactcgcacg tatccaagta aagtagttta gctaaagaaa ggttcttcat tgcttttctg 6210
ttcacagttg tggtctgtgt ttttaagaat gtaacttggt tttagattat acttgcacac 6270
gtgactttac taccagccac gttgacacaa aacagggttct gggttcaggta aagttgcgtc 6330
agtcacctgc agcagaaatc cctcttcatt cctcttctct gtgttcattc ctcttctgtg 6390
ctgttctgaa gcttctacca atactctttc catattgtct ttttcagtga agagaaatgc 6450
attcaagatt aggtccctcc tgtctatcca gtttcaggat tttatgttgt tttatacaca 6510
gttatttcag tatagaaact ggctttattg ccaagtgttt ttttaaacat gttttaactc 6570
tcatatgagc aaactgtcca acttcagttt ttcataagat taaacttctt acgatcaaac 6630
ttgtctcttg caatgatgtg atgagttgcc aaataattga gattatttta aaatgttttg 6690
ttcatattct tgttttataa ttaaaattta cattcagttg gtatggggttt ttttttttat 6750
tttgactctt aatgtaaggc ggatatttct gtcattttac atgggttctt actgagattt 6810
tatatataaa ttataaaatg tttacaaaaa aaaaaaaa 6848

```

<210> 964
 <211> 1393
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (266)..(1330)

```

<400> 964
accgctccgg aattcccggtg tgcagatgtt cgtgctacat ttccaatcac ctaaacaacc 60
gagcaagaca agccactccg acaaggttgg ctgcccggcg ggtctctgtg agagatccag 120
gtagatgggtg aacggccccg gcagctgagg gcaggccagg ccccagacg catcagaccc 180
tgaaggactg cgtggtggga gcctgcacc gctcctggcc cggggcccc tggatccgtc 240
ggggcgccct caccagctg ttagc atg atg tct tac ctc aaa caa ccc cca 292
Met Met Ser Tyr Leu Lys Gln Pro Pro
1 5
tac ggc atg aac ggg ctg ggc ctg gcc ggg ccc gcc atg gac ctc ctg 340
Tyr Gly Met Asn Gly Leu Gly Leu Ala Gly Pro Ala Met Asp Leu Leu
10 15 20 25
cac cca tcc gtg ggc tat ccg gcc act ccg cgg aag cag cgg cgg gag 388

```

His	Pro	Ser	Val	Gly	Tyr	Pro	Ala	Thr	Pro	Arg	Lys	Gln	Arg	Arg	Glu	
				30					35						40	
cgc	acc	acc	ttc	acg	cgt	tca	cag	ctg	gac	gtg	ctc	gag	gcg	ctc	ttc	436
Arg	Thr	Thr	Phe	Thr	Arg	Ser	Gln	Leu	Asp	Val	Leu	Glu	Ala	Leu	Phe	
			45					50					55			
gcc	aag	act	cgc	tac	cct	gac	atc	ttc	atg	cgg	gag	gag	gtg	gcg	ctc	484
Ala	Lys	Thr	Arg	Tyr	Pro	Asp	Ile	Phe	Met	Arg	Glu	Glu	Val	Ala	Leu	
			60				65						70			
aag	atc	aac	ctg	ccg	gag	tct	aga	gtc	cag	gtc	tgg	ttc	aag	aac	cgc	532
Lys	Ile	Asn	Leu	Pro	Glu	Ser	Arg	Val	Gln	Val	Trp	Phe	Lys	Asn	Arg	
	75						80					85				
cgc	gcc	aaa	tgc	cgc	cag	cag	cag	cag	agc	ggg	agc	gga	acc	aag	agc	580
Arg	Ala	Lys	Cys	Arg	Gln	Gln	Gln	Gln	Ser	Gly	Ser	Gly	Thr	Lys	Ser	
					95					100					105	
cgc	cca	gcc	aag	aag	aag	tcc	tct	cca	gtg	cgg	gag	agc	tcg	ggc	tcc	628
Arg	Pro	Ala	Lys	Lys	Lys	Ser	Ser	Pro	Val	Arg	Glu	Ser	Ser	Gly	Ser	
					110					115					120	
gaa	agc	agt	ggc	caa	ttc	acg	ccg	cca	gct	gtg	tcc	agc	tct	gcc	tcg	676
Glu	Ser	Ser	Gly	Gln	Phe	Thr	Pro	Pro	Ala	Val	Ser	Ser	Ser	Ala	Ser	
			125						130					135		
tcc	tct	agc	tcg	gcg	tcc	agc	tct	tcc	gcc	aac	cca	gcg	gct	gca	gcg	724
Ser	Ser	Ser	Ser	Ala	Ser	Ser	Ser	Ser	Ala	Asn	Pro	Ala	Ala	Ala	Ala	
			140					145					150			
gct	gcg	gga	cta	ggt	ggg	aac	ccg	gtg	gcg	gcc	gcg	tcg	tcg	ctg	agt	772
Ala	Ala	Gly	Leu	Gly	Gly	Asn	Pro	Val	Ala	Ala	Ala	Ser	Ser	Leu	Ser	
			155			160						165				
aca	cca	gct	gcc	tca	tct	atc	tgg	agc	ccg	gcc	tcc	atc	tcg	cca	ggc	820
Thr	Pro	Ala	Ala	Ser	Ser	Ile	Trp	Ser	Pro	Ala	Ser	Ile	Ser	Pro	Gly	
			170			175				180					185	
tca	gcg	ccc	gcg	tcc	gtg	tcg	gtg	ccg	gag	cca	ttg	gcc	gcg	cct	agc	868
Ser	Ala	Pro	Ala	Ser	Val	Ser	Val	Pro	Glu	Pro	Leu	Ala	Ala	Pro	Ser	
					190				195					200		
aac	acc	tcg	tgt	atg	cag	cgc	tcc	gta	gct	gca	ggc	gcc	gcc	acc	gca	916
Asn	Thr	Ser	Cys	Met	Gln	Arg	Ser	Val	Ala	Ala	Gly	Ala	Ala	Thr	Ala	
			205					210					215			
gca	gcc	tct	tat	ccc	atg	tcc	tac	ggc	cag	ggc	ggc	agc	tac	ggc	caa	964
Ala	Ala	Ser	Tyr	Pro	Met	Ser	Tyr	Gly	Gln	Gly	Gly	Ser	Tyr	Gly	Gln	
			220				225						230			
ggc	tac	cct	acg	ccc	tcc	tct	tcc	tac	ttt	ggc	ggc	gtg	gac	tgc	agc	1012
Gly	Tyr	Pro	Thr	Pro	Ser	Ser	Ser	Tyr	Phe	Gly	Gly	Val	Asp	Cys	Ser	
			235				240					245				
tca	tac	cta	gcg	ccc	atg	cac	tca	cat	cac	cac	ccg	cac	cag	ctc	agc	1060
Ser	Tyr	Leu	Ala	Pro	Met	His	Ser	His	His	His	Pro	His	Gln	Leu	Ser	
			250			255				260					265	
ccc	atg	gca	ccc	tcc	tcc	atg	gcg	ggc	cac	cat	cat	cac	cac	cca	cat	1108
Pro	Met	Ala	Pro	Ser	Ser	Met	Ala	Gly	His	His	His	His	His	Pro	His	
					270				275					280		
gcg	cac	cac	ccg	ttg	agc	cag	tcc	tca	ggc	cac	cac	cac	cac	cat	cac	1156

Ala His His Pro Leu Ser Gln Ser Ser Gly His His His His His His
285 290 295

cac cac cac cac caa ggc tac ggt ggc tct ggg ctt gcc ttc aac tct 1204
His His His His Gln Gly Tyr Gly Gly Ser Gly Leu Ala Phe Asn Ser
300 305 310

gcc gac tgc ttg gat tac aag gag cct ggc gcc gct gct gct tcc tcc 1252
Ala Asp Cys Leu Asp Tyr Lys Glu Pro Gly Ala Ala Ala Ala Ser Ser
315 320 325

gcc tgg aaa ctc aac ttc aac tcc ccc gtc tgt ctg gac tat aag gac 1300
Ala Trp Lys Leu Asn Phe Asn Ser Pro Val Cys Leu Asp Tyr Lys Asp
330 335 340 345

caa gcc tca tgg cgg ttc cag gtc ttg tga g cccaggaatg aaagaggaga 1351
Gln Ala Ser Trp Arg Phe Gln Val Leu *
350 355

agaaacgcaa ctacctgctg cctccgtggt cccgatcctg tt 1393

<210> 965
<211> 2802
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (65) .. (2425)

<400> 965
ccggaatattc ccgggtcgac gatttcgtcc tccgggtctg aggaggcttc taaaagggcc 60

tcac atg ccc cgg gag cca cgt gga tac aga acg agg gtt ccc gct ctc 109
Met Pro Arg Glu Pro Arg Gly Tyr Arg Thr Arg Val Pro Ala Leu
1 5 10 15

aga gag ttg gtc ccc agt tcc cat gca ggg agt gga gcc tct gag cac 157
Arg Glu Leu Val Pro Ser Ser His Ala Gly Ser Gly Ala Ser Glu His
20 25 30

tgc cag aac aac agg cag ggt tct cga cag cac aga gcc tca cgc aat 205
Cys Gln Asn Asn Arg Gln Gly Ser Arg Gln His Arg Ala Ser Arg Asn
35 40 45

gtg cag gca ggt ggt gct ctc gct cca cca cgg cac ctc tgc ggt ctc 253
Val Gln Ala Gly Gly Ala Leu Ala Pro Pro Arg His Leu Cys Gly Leu
50 55 60

tgc agc cgt ttg cat ttc ctg aaa ccg gat ctt agt gtc aga gcc gcc 301
Cys Ser Arg Leu His Phe Leu Lys Pro Asp Leu Ser Val Arg Ala Ala
65 70 75

ccc agc cgg gcg ggc gcc tca gtc atg gcc ctg cgc aag gaa ctg ctc 349
Pro Ser Arg Ala Gly Ala Ser Val Met Ala Leu Arg Lys Glu Leu Leu
80 85 90 95

aag tcc atc tgg tac gcc ttt acc gcg ctg gac gtg gag aag agt ggc 397
Lys Ser Ile Trp Tyr Ala Phe Thr Ala Leu Asp Val Glu Lys Ser Gly
100 105 110

aaa gtc tcc aag tcc cag ccc agg gtg ctg tcc cac aac ctg tac acg	445
Lys Val Ser Lys Ser Gln Pro Arg Val Leu Ser His Asn Leu Tyr Thr	
115 120 125	
gtc ctg cac atc ccc cat gac ccc gtg gcc ctg gag gaa cac ttc cga	493
Val Leu His Ile Pro His Asp Pro Val Ala Leu Glu Glu His Phe Arg	
130 135 140	
gat gat gat gac ggc cct gtg tcc agc cag gga tac atg ccc tac ctc	541
Asp Asp Asp Asp Gly Pro Val Ser Ser Gln Gly Tyr Met Pro Tyr Leu	
145 150 155	
aac aag tac atc ctg gac aag gtg gag gag ggg gct ttt gtt aaa gag	589
Asn Lys Tyr Ile Leu Asp Lys Val Glu Glu Gly Ala Phe Val Lys Glu	
160 165 170 175	
cac ttt gat gag ctg tgc tgg acg ctg acg gcc aag aag aac tat cgg	637
His Phe Asp Glu Leu Cys Trp Thr Leu Thr Ala Lys Lys Asn Tyr Arg	
180 185 190	
gca gat agc aac ggg aac agt atg ctc tcc aat cag gat gcc ttc cgc	685
Ala Asp Ser Asn Gly Asn Ser Met Leu Ser Asn Gln Asp Ala Phe Arg	
195 200 205	
ctc tgg tgc ctc ttc aac ttc ctg tct gag gac aag tac cct ctg atc	733
Leu Trp Cys Leu Phe Asn Phe Leu Ser Glu Asp Lys Tyr Pro Leu Ile	
210 215 220	
atg gtt cct gat gag ggt gat gaa ggg aac cac ccg agc cct gaa cca	781
Met Val Pro Asp Glu Gly Asp Glu Gly Asn His Pro Ser Pro Glu Pro	
225 230 235	
gtg ccc tct act aaa cac cca aac aag acc cag gat ccc cca gaa agt	829
Val Pro Ser Thr Lys His Pro Asn Lys Thr Gln Asp Pro Pro Glu Ser	
240 245 250 255	
cct aaa cag agt gtc cca aaa agc tgc tgg ggc agg ctc tgg gag cca	877
Pro Lys Gln Ser Val Pro Lys Ser Cys Trp Gly Arg Leu Trp Glu Pro	
260 265 270	
gat aga gca ctc cct ggt gtt ggt gct ggc aac acc acc tgc tgc agc	925
Asp Arg Ala Leu Pro Gly Val Gly Ala Gly Asn Thr Thr Cys Cys Ser	
275 280 285	
tac cag gcc ttc ctt ctc ctg ctc cag gtg gaa tac ctg ctg aaa aag	973
Tyr Gln Ala Phe Leu Leu Leu Leu Gln Val Glu Tyr Leu Leu Lys Lys	
290 295 300	
gta ctc agc agc atg agc ttg gag gtg agc ttg ggt gag ctg gag gag	1021
Val Leu Ser Ser Met Ser Leu Glu Val Ser Leu Gly Glu Leu Glu Glu	
305 310 315	
ctt ctg gcc cag gag gcc cag gtg gcc cag acc acc ggg ggg ctc agc	1069
Leu Leu Ala Gln Glu Ala Gln Val Ala Gln Thr Thr Gly Gly Leu Ser	
320 325 330 335	
gtc tgg cag ttc ctg gag ctc ttc aat tgc ggc tgc tgc ctg cgg ggc	1117
Val Trp Gln Phe Leu Glu Leu Phe Asn Ser Gly Cys Cys Leu Arg Gly	
340 345 350	
gtg ggc cgg gac acc ctc agc atg gcc atc cac gag gtc tac cag gag	1165
Val Gly Arg Asp Thr Leu Ser Met Ala Ile His Glu Val Tyr Gln Glu	
355 360 365	

ctc atc caa gat gtc ctg aag cgg ggc tac ctg tgg aag cga ggg cac	1213
Leu Ile Gln Asp Val Leu Lys Arg Gly Tyr Leu Trp Lys Arg Gly His	
370 375 380	
ctg aga agg aac tgg gcc gaa cgc tgg ttc cag ctg cag ccc agc tgc	1261
Leu Arg Arg Asn Trp Ala Glu Arg Trp Phe Gln Leu Gln Pro Ser Cys	
385 390 395	
ctc tgc tac ttt ggg agt gaa gag tgc aaa gag aaa agg ggc att atc	1309
Leu Cys Tyr Phe Gly Ser Glu Glu Cys Lys Glu Lys Arg Gly Ile Ile	
400 405 410 415	
ccg ctg gat gca cac tgc tgc gtg gag gtg ctg cca gac cgc gac gga	1357
Pro Leu Asp Ala His Cys Cys Val Glu Val Leu Pro Asp Arg Asp Gly	
420 425 430	
aag cgc tgc atg ttc tgt gtg aag aca gcc acc cgc acg tat gag atg	1405
Lys Arg Cys Met Phe Cys Val Lys Thr Ala Thr Arg Thr Tyr Glu Met	
435 440 445	
agc gcc tca gac acg cgc cag cgc cag gag tgg aca gct gcc atc cag	1453
Ser Ala Ser Asp Thr Arg Gln Arg Gln Glu Trp Thr Ala Ala Ile Gln	
450 455 460	
atg gcg atc cgg ctg cag gcc gag ggg aag acg tcc cta cac aag gac	1501
Met Ala Ile Arg Leu Gln Ala Glu Gly Lys Thr Ser Leu His Lys Asp	
465 470 475	
ctg aag cag aaa cgg cgc gag cag cgg gag cag cgg gag cgg cgc cgg	1549
Leu Lys Gln Lys Arg Arg Glu Gln Arg Glu Gln Arg Glu Arg Arg Arg	
480 485 490 495	
gcg gcc aag gaa gag gag ctg ctg cgg ctg cag cag ctg cag gag gag	1597
Ala Ala Lys Glu Glu Glu Leu Leu Arg Leu Gln Gln Leu Gln Glu Glu	
500 505 510	
aag gag cgg aag ctg cag gag ctg gag ctg ctg cag gag gcg cag cgg	1645
Lys Glu Arg Lys Leu Gln Glu Leu Glu Leu Leu Gln Glu Ala Gln Arg	
515 520 525	
cag gcc gag cgg ctg ctg cag gag gag gag gaa cgg cgc cgc agc cag	1693
Gln Ala Glu Arg Leu Leu Gln Glu Glu Glu Glu Arg Arg Arg Ser Gln	
530 535 540	
cac cgc gag ctg cag cag gcg ctc gag ggc caa ctg cgc gag gcg gag	1741
His Arg Glu Leu Gln Gln Ala Leu Glu Gly Gln Leu Arg Glu Ala Glu	
545 550 555	
cag gcc cgg gcc tcc atg cag gct gag atg gag ctg aag gag gag gag	1789
Gln Ala Arg Ala Ser Met Gln Ala Glu Met Glu Leu Lys Glu Glu Glu	
560 565 570 575	
gct gcc cgg cag cgg cag cgc atc aag gag ctg gag gag atg cag cag	1837
Ala Ala Arg Gln Arg Gln Arg Ile Lys Glu Leu Glu Glu Met Gln Gln	
580 585 590	
cgg ttg cag gag gcc ctg caa cta gag gtg aaa gct cgg cga gat gaa	1885
Arg Leu Gln Glu Ala Leu Gln Leu Glu Val Lys Ala Arg Arg Asp Glu	
595 600 605	
gaa tct gtg cga atc gct cag acc aga ctg ctg gaa gag gag gaa gag	1933
Glu Ser Val Arg Ile Ala Gln Thr Arg Leu Leu Glu Glu Glu Glu	
610 615 620	

aag ctg aag cag ttg atg cag ctg aag gag gag cag gag cgc tac atc	1981
Lys Leu Lys Gln Leu Met Gln Leu Lys Glu Glu Gln Glu Arg Tyr Ile	
625 630 635	
 gaa cgg gcg cag cag gag aag gaa gag ctg cag cag gag atg gca cag	2029
Glu Arg Ala Gln Gln Glu Lys Glu Glu Leu Gln Gln Glu Met Ala Gln	
640 645 650 655	
 cag agc cgc tcc ctg cag cag gcc cag cag cag ctg gag gag gtg cgg	2077
Gln Ser Arg Ser Leu Gln Gln Ala Gln Gln Gln Leu Glu Glu Val Arg	
660 665 670	
 cag aac cgg cag agg gct gac gag gat gtg gag gct gcc cag aga aaa	2125
Gln Asn Arg Gln Arg Ala Asp Glu Asp Val Glu Ala Ala Gln Arg Lys	
675 680 685	
 ctg cgc cag gcc agc acc aac gtg aaa cac tgg aat gtc cag atg aac	2173
Leu Arg Gln Ala Ser Thr Asn Val Lys His Trp Asn Val Gln Met Asn	
690 695 700	
 cgg ctg atg cat cca att gag cct gga gat aag cgt ccg gtc acc agc	2221
Arg Leu Met His Pro Ile Glu Pro Gly Asp Lys Arg Pro Val Thr Ser	
705 710 715	
 agc tcc ttc tca ggc ttc cag ccc cct ctg ctt gcc cac cgt gac tcc	2269
Ser Ser Phe Ser Gly Phe Gln Pro Pro Leu Leu Ala His Arg Asp Ser	
720 725 730 735	
 tcc cta aag cgc ctg acc cgc tgg gga tcc cag gcc aac agg acc ccc	2317
Ser Leu Lys Arg Leu Thr Arg Trp Gly Ser Gln Gly Asn Arg Thr Pro	
740 745 750	
 tcg ccc aac agc aat gag cag cag aag tcc ctc aat ggt ggg gat gag	2365
Ser Pro Asn Ser Asn Glu Gln Gln Lys Ser Leu Asn Gly Gly Asp Glu	
755 760 765	
 gct cct gcc ccg gct tcc acc cct cag gaa gat aaa ctg gat cca gca	2413
Ala Pro Ala Pro Ala Ser Thr Pro Gln Glu Asp Lys Leu Asp Pro Ala	
770 775 780	
 cca gaa aat tag cct ctcttagccc ctgtttcttc ccaatgtcat atccaccagg	2468
Pro Glu Asn *	
785	
 acctggccac agctggcctg tgggtgatcc cagctcttac taggagaggg agctgaggtc	2528
ctggtgccag gggcccaggc cctccaacca taaacagtcc aggatggaac ctggttcacc	2588
cttcatacca gctccaagcc ccagaccatg ggagctgtct gggatgttga tccttgagaa	2648
cttgccctg tgcttttagac ccaaggaccc gattcctggg ctaggaaaga gagaacaagc	2708
aagccggggc tacctgcccc caggtggcca ccaagtgtg gaagcacatt tctaaataaa	2768
aactgctctt agaatgaaaa aaaaaaaaaa aaaa	2802

<210> 966
 <211> 1035
 <212> DNA
 <213> Homo sapiens

<220>

<221> CDS

<222> (160)..(507)

<400> 966

```

caagctggct agcggtttaaa cttaagcttg gtaccgagct cggatccact agtccagtgt      60
ggtggaattc gatggcagga cttggtctgc cttggaggca gtcgtgccca ggagcagaaa      120
cccctgcagc agctgtggaa cgccatcctg ctggtggcc  atg ctc ctg tgc aca      174
                                         Met Leu Leu Cys Thr
                                         1      5

ggc ctc gtg gtc cag gcc cag cgg cag gcg tgc cgg cag agc cag cgg      222
Gly Leu Val Val Gln Ala Gln Arg Gln Ala Ser Arg Gln Ser Gln Arg
                        10                        15                        20

gag ctc gga ggc cag gtg gac ctg ttt aag cgc cgc gtg gtg cgg aga      270
Glu Leu Gly Gly Gln Val Asp Leu Phe Lys Arg Arg Val Val Arg Arg
                        25                        30                        35

ctg gca tcc ctc aag aca cgg cgc tgc cgg ctg agc agg gca gcg cag      318
Leu Ala Ser Leu Lys Thr Arg Arg Cys Arg Leu Ser Arg Ala Ala Gln
                        40                        45                        50

ggc ctc cca gat ccg ggt gct gag acc tgt gcg gtg tgc ctg gac tac      366
Gly Leu Pro Asp Pro Gly Ala Glu Thr Cys Ala Val Cys Leu Asp Tyr
                        55                        60                        65

ttc tgc aac aaa cag tgg ctc cgg gtg ctg ccc tgt aag cac gag ttt      414
Phe Cys Asn Lys Gln Trp Leu Arg Val Leu Pro Cys Lys His Glu Phe
                        70                        75                        80                        85

cac cga gac tgt gtg gac ccc tgg ctg atg ctc cag cag acc tgc cca      462
His Arg Asp Cys Val Asp Pro Trp Leu Met Leu Gln Gln Thr Cys Pro
                        90                        95                        100

ctg tgc aaa ttc aac gtc ctg ggg aac cgc tac tcc gat gat tag ctg      510
Leu Cys Lys Phe Asn Val Leu Gly Asn Arg Tyr Ser Asp Asp *
                        105                        110                        115

cccagctgga ctctgcacat ggggatggac ccttctgccc tgcaccccggt tcctcagcct      570
gggctcccag gacaggacag gatgggacag caggatagac aggacagcaa gccagtgagg      630
tgggaggaag gatgagggcc ccaccatgtc cacactggga aggagggccc cacagcttca      690
gactgaggat ctagggtctg gacctgtcag tcaaggaagc gagtgtcact ttgggacctt      750
ctctgcaatc ctgtgacgtg agtctgcctt ccttacaggc agctcccagg tcaataagga      810
aagagaatat ggggccagtg tagctgtcgc cagggttctg ggagctccct gtggcctgtc      870
tgggaattcc tgggggctga gactacagtg gccaggtttt gtgcttattg attggggggg      930
gggttgaggg aagagctatc tggccttggc gtaccctggc ctgaccgtct ttcaggatac      990
ttcttgtcaa ggctgtctgc ctgttgccct tggctctcaa gcaact      1035

```

<210> 967

<211> 826

<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (22) .. (780)

```

<400> 967
gccagctgtg ctttattgac a  atg cgc ccc tca ggc ctt gac cgc gta ctt      51
                        Met Arg Pro Ser Gly Leu Asp Arg Val Leu
                        1              5              10

ccg cag cgg gta cag ccg ctc ctt ccg ctg ctg ctt ctt ggt ctt cag      99
Pro Gln Arg Val Gln Pro Leu Leu Pro Leu Leu Leu Gly Leu Gln
              15              20              25

gtt ctc ctc gtg ctt gtt gag ccg gcg gcg cat ggc acg tgt ctt ctt     147
Val Leu Leu Val Leu Val Glu Pro Ala Ala His Gly Thr Cys Leu Leu
              30              35              40

agg ccg cag gtc cag ggg ctt gta ctt ctt gcc ctt gta gaa ttt cct     195
Arg Pro Gln Val Gln Gly Leu Val Leu Leu Ala Leu Val Glu Phe Pro
              45              50              55

gag gtt ttc ttt ctg agt ctg gtt aat aac tgt gag aac acg ggc aat     243
Glu Val Phe Phe Leu Ser Leu Val Asn Asn Cys Glu Asn Thr Gly Asn
              60              65              70

gga ttt ccg gac gac tcg gat ctt aga gag ctt gga ggc cgc acc gcc     291
Gly Phe Pro Asp Asp Ser Asp Leu Arg Glu Leu Gly Gly Arg Thr Ala
              75              80              85              90

tgt cac ttt ggc gac gcg cag ctg gga cag ctc cac ctt cag gtc gtc     339
Cys His Phe Gly Asp Ala Gln Leu Gly Gln Leu His Leu Gln Val Val
              95              100              105

cag ctg ttt cag cag ctc ctc ctt ctt ctt ccc tcg gag cgg gcg gcg     387
Gln Leu Phe Gln Gln Leu Leu Leu Leu Leu Pro Ser Glu Arg Ala Ala
              110              115              120

gcg ttg gcg gct tgt gca gca atg gcc aag atc aag gct cga gat ctt     435
Ala Leu Ala Ala Cys Ala Ala Met Ala Lys Ile Lys Ala Arg Asp Leu
              125              130              135

cgc ggg aag aag aag gag gag ctg ctg aaa cag ctg gac gac ctg aag     483
Arg Gly Lys Lys Lys Glu Glu Leu Leu Lys Gln Leu Asp Asp Leu Lys
              140              145              150

gtg gag ctg tcc cag ctg cgc gtc gcc aaa gtg aca ggc ggt gcg gcc     531
Val Glu Leu Ser Gln Leu Arg Val Ala Lys Val Thr Gly Gly Ala Ala
              155              160              165              170

tcc aag ctc tct aag atc cga gtc gtc ccg aaa tcc att gcc cgt gtt     579
Ser Lys Leu Ser Lys Ile Arg Val Val Arg Lys Ser Ile Ala Arg Val
              175              180              185

ctc aca gtt att aac cag act cag aaa gaa aac ctc agg aaa ttc tac     627
Leu Thr Val Ile Asn Gln Thr Gln Lys Glu Asn Leu Arg Lys Phe Tyr
              190              195              200

aag ggc aag aag tac aag ccc ctg gac ctg ccg cct aag aag aca cgt     675
Lys Gly Lys Lys Tyr Lys Pro Leu Asp Leu Arg Pro Lys Lys Thr Arg
              205              210              215

```

```

gcc atg cgc cgc cgg ctc aac aag cac gag gag aac ctg aag acc aag      723
Ala Met Arg Arg Arg Leu Asn Lys His Glu Glu Asn Leu Lys Thr Lys
      220                      225                      230

aag cag cag cgg aag gag cgg ctg tac ccg ctg cgg aag tac gcg gtc      771
Lys Gln Gln Arg Lys Glu Arg Leu Tyr Pro Leu Arg Lys Tyr Ala Val
235                      240                      245                      250

aag gcc tga gggcgccatt gtcaataaag cacagctggc tgagaaaaaa aaaaaa      826
Lys Ala *
```

```

<210> 968
<211> 1360
<212> DNA
<213> Homo sapiens
```

```

<220>
<221> CDS
<222> (156)..(932)
```

```

<400> 968
cactataggg aatttgcccc tcgaggccaa gaattcggca cgaggaagaa tttgtttgta      60

aggtatggga aggtcgggtgg cgagtgatcc ctcatgatgt actaccagac tggctcaagg      120

ataatgactt cctcttgcac ggacaccggc ctccct      atg cct tct tta cgg gcc      173
                        Met Pro Ser Leu Arg Ala
                        1                      5

tgt ttt aag agc att ttc aga ata cac aca gaa aca ggc aac att tgg      221
Cys Phe Lys Ser Ile Phe Arg Ile His Thr Glu Thr Gly Asn Ile Trp
                        10                      15                      20

aca cat ctc tta ggt tgt gta ttc ttc ctg tgc ctg ggg atc ttt tat      269
Thr His Leu Leu Gly Cys Val Phe Phe Leu Cys Leu Gly Ile Phe Tyr
                        25                      30                      35

atg ttt cgc cca aat atc tcc ttt gtg gcc cct ctg caa gag aag gtg      317
Met Phe Arg Pro Asn Ile Ser Phe Val Ala Pro Leu Gln Glu Lys Val
                        40                      45                      50

gtc ttt gga tta ttt ttc tta gga gcc att ctc tgc ctt tct ttt tca      365
Val Phe Gly Leu Phe Phe Leu Gly Ala Ile Leu Cys Leu Ser Phe Ser
55                      60                      65                      70

tgg ctc ttc cac aca gtc tac tgc cac tca gag ggg gtc tct cgg ctc      413
Trp Leu Phe His Thr Val Tyr Cys His Ser Glu Gly Val Ser Arg Leu
                        75                      80                      85

ttc tct aaa ctg gat tac tct ggt att gct ctt ctg att atg gga agt      461
Phe Ser Lys Leu Asp Tyr Ser Gly Ile Ala Leu Leu Ile Met Gly Ser
                        90                      95                      100

ttt gtt cct tgg ctt tat tat tct ttc tac tgt aat cca caa cct tgc      509
Phe Val Pro Trp Leu Tyr Tyr Ser Phe Tyr Cys Asn Pro Gln Pro Cys
                        105                      110                      115

ttc atc tac ttg att gtc atc tgt gtg ctg ggc att gca gcc att ata      557
Phe Ile Tyr Leu Ile Val Ile Cys Val Leu Gly Ile Ala Ala Ile Ile
```

120	125	130	
gtc tcc cag tgg gac atg ttt gcc acc cct cag tat cgg gga gta aga			605
Val Ser Gln Trp Asp Met Phe Ala Thr Pro Gln Tyr Arg Gly Val Arg			
135	140	145	150
gca gga gtg ttt ttg ggc cta ggc ctg agt gga atc att cct acc ttg			653
Ala Gly Val Phe Leu Gly Leu Gly Leu Ser Gly Ile Ile Pro Thr Leu			
	155	160	165
cac tat gtc atc tcg gag ggg ttc ctt aag gcc gcc acc ata ggg cag			701
His Tyr Val Ile Ser Glu Gly Phe Leu Lys Ala Ala Thr Ile Gly Gln			
	170	175	180
ata ggc tgg ttg atg ctg atg gcc agc ctc tac atc aca gga gct gcc			749
Ile Gly Trp Leu Met Leu Met Ala Ser Leu Tyr Ile Thr Gly Ala Ala			
	185	190	195
ctg tat gct gcc cgg atc ccc gaa cgc ttt ttc cct ggc aaa tgt gac			797
Leu Tyr Ala Ala Arg Ile Pro Glu Arg Phe Phe Pro Gly Lys Cys Asp			
200	205	210	
atc tgg ttt cac tct cat cag ctg ttt cat atc ttt gtg gtt gct gga			845
Ile Trp Phe His Ser His Gln Leu Phe His Ile Phe Val Val Ala Gly			
215	220	225	230
gct ttt gtt cac ttc cat ggt gtc tca aac ctc cag gag ttt cgt ttc			893
Ala Phe Val His Phe His Gly Val Ser Asn Leu Gln Glu Phe Arg Phe			
	235	240	245
atg atc ggc ggg ggc tgc agt gaa gag gat gca ctg tga tacctaccag			942
Met Ile Gly Gly Gly Cys Ser Glu Glu Asp Ala Leu *			
250	255		
tctccagggga ctatgaccct aaaccagggc ctgcggcact tgcggggcctc cctgctggct			1002
actgatgccca gtaccagagg agccccaaaa ctttgacagc ctcggtgggct ttgtgacggc			1062
ccagggggctc tgcgtggtac atgactgaga agagaaaaac aaaaataaat catacctcaa			1122
aggatggagt gcatcaattg ggagaaaagg agacatagcc caaaccttg cttattcttg			1182
ggatctactg attgctgggct ctgcaagacc cttggcaaac tggcttctga tccatatcat			1242
atattatttgt agaagatggc gaaacagttt agctgggtgt tctttcttct ccttttctct			1302
ctctctatga caataatata aaccaattta ataaaggagt tgaaagaaaa aaaaaaaaa			1360

<210> 969
 <211> 1458
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (273) .. (1151)

<400> 969	
cgccgaccag gcctcgaacg ggatggcaga ggaggtgagg agggaggaag cgtccggagt	60
ggggcggggcc cggactccga cccccggggc gcttcgagcc cccagctgg tcaccgaggc	120

accgcgcgtt	caccagggcc	agtagccgcc	ccctcgcgca	ccccggcccc	gcctcacacg	180
cgcgcccgag	cgagccccgg	gtccccctcg	ggcccagcgt	ggctgcaggg	tgctcagtgg	240
tctctcgggt	ctcgggacag	gtgagcacc	tg	atg aag gcc acg gtc ctg atg		293
				Met Lys Ala Thr Val Leu Met		
			1		5	
cgg cag cct ggg cgg gtg cag gag atc gtg ggc gcc ctc cgc aag ggc						341
Arg Gln Pro Gly Arg Val Gln Glu Ile Val Gly Ala Leu Arg Lys Gly						
	10		15		20	
ggc gga gac cgg tta cag gtg att tct gat ttt gac atg acc ttg agc						389
Gly Gly Asp Arg Leu Gln Val Ile Ser Asp Phe Asp Met Thr Leu Ser						
	25		30		35	
agg ttt gca tat aat gga aag cga tgc cct tct tct tac aat att ctg						437
Arg Phe Ala Tyr Asn Gly Lys Arg Cys Pro Ser Ser Tyr Asn Ile Leu						
40		45		50		55
gat aat agc aag atc atc agt gag gag tgt cgg aaa gag ctc aca gcg						485
Asp Asn Ser Lys Ile Ile Ser Glu Glu Cys Arg Lys Glu Leu Thr Ala						
		60		65		70
ctc ctt cac cac tat tac cca att gag atc gac cca cac cgg acc gtc						533
Leu Leu His His Tyr Tyr Pro Ile Glu Ile Asp Pro His Arg Thr Val						
	75		80		85	
aag gag aag cta cct cat atg gtg gaa tgg tgg acc aaa gcg cac aat						581
Lys Glu Lys Leu Pro His Met Val Glu Trp Trp Thr Lys Ala His Asn						
	90		95		100	
ctc cta tgt cag cag aag att cag aag ttt cag ata gcc cag gtg gtt						629
Leu Leu Cys Gln Gln Lys Ile Gln Lys Phe Gln Ile Ala Gln Val Val						
	105		110		115	
aga gag tcc aat gca atg ctc agg gag gga tat aag acc ttc ttc aac						677
Arg Glu Ser Asn Ala Met Leu Arg Glu Gly Tyr Lys Thr Phe Phe Asn						
120		125		130		135
aca ctc tac cat aac aac att ccc ctt ttc atc ttt tct gcg ggc att						725
Thr Leu Tyr His Asn Asn Ile Pro Leu Phe Ile Phe Ser Ala Gly Ile						
	140		145		150	
ggc gat atc ctg gaa gaa att atc cga cag atg aaa gtg ttc cac ccc						773
Gly Asp Ile Leu Glu Glu Ile Ile Arg Gln Met Lys Val Phe His Pro						
	155		160		165	
aac atc cac atc gtg tct aac tac atg gat ttt aat gaa gat ggt ttt						821
Asn Ile His Ile Val Ser Asn Tyr Met Asp Phe Asn Glu Asp Gly Phe						
	170		175		180	
ctc cag gga ttt aag ggc cag ctg ata cac aca tac aac aag aac agc						869
Leu Gln Gly Phe Lys Gly Gln Leu Ile His Thr Tyr Asn Lys Asn Ser						
	185		190		195	
tct gcg tgt gag aac tct ggt tac ttc cag caa ctt gag ggc aaa acc						917
Ser Ala Cys Glu Asn Ser Gly Tyr Phe Gln Gln Leu Glu Gly Lys Thr						
200		205		210		215
aat gtc atc ctg ctg gga gac tct atc ggc gac ctc acc atg gcc gat						965
Asn Val Ile Leu Leu Gly Asp Ser Ile Gly Asp Leu Thr Met Ala Asp						
	220		225		230	

```

ggg gtt cct ggt gtg cag aac att ctc aaa att ggc ttc ctg aat gac      1013
Gly Val Pro Gly Val Gln Asn Ile Leu Lys Ile Gly Phe Leu Asn Asp
      235                      240                      245

aag gtg gag gag cgg cgg gag cgc tac atg gac tcc tat gac atc gtg      1061
Lys Val Glu Glu Arg Arg Glu Arg Tyr Met Asp Ser Tyr Asp Ile Val
      250                      255                      260

ctg gag aag gac gag act ctg gat gtg gtc aac ggg cta ctg cag cac      1109
Leu Glu Lys Asp Glu Thr Leu Asp Val Val Asn Gly Leu Leu Gln His
      265                      270                      275

atc ctg tgc cag ggg gtc cag ctg gag atg caa ggc ccc tga aggcgca      1158
Ile Leu Cys Gln Gly Val Gln Leu Glu Met Gln Gly Pro *
      280                      285                      290

ggctccagcc cggcctgcag gccgtggtga ggagggggcgc ctccccagag tctgctcccc      1218

cgtgaacaca gagcagaggc caggggtggcc agcagtggct gggtccttcc gcgccccctcc      1278

gtcctccttt ccctgagcac cttcatcacc agaggcttga aggaaccccg ccatgtggca      1338

gggcacaggc actgttcctg gtgaaccttg gaccacagca tgtcagtgct ctagggattg      1398

tctactccag ggattttctt caaaattttt aaacatggga agttcaaaca aaaaaaaaaa      1458

```

<210> 970
 <211> 644
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (39) .. (500)

```

<400> 970
gggtcgaccc acgcgtccgc aatgctgctc tggggaac      atg gag gag gac aac      53
Met Glu Glu Asp Asn
      1                      5

tgg agg tgg cat ttc tac gac acc gtg aag ggc tcc gac tgg ctg ggg      101
Trp Arg Trp His Phe Tyr Asp Thr Val Lys Gly Ser Asp Trp Leu Gly
      10                      15                      20

gac cag gat gcc atc cac tac atg acg gag cag gcc ccc gcc gcc gtg      149
Asp Gln Asp Ala Ile His Tyr Met Thr Glu Gln Ala Pro Ala Ala Val
      25                      30                      35

gtc gag cta gaa aat tat ggc atg ccg ttt agc aga act gaa gat ggg      197
Val Glu Leu Glu Asn Tyr Gly Met Pro Phe Ser Arg Thr Glu Asp Gly
      40                      45                      50

aag att tat cag cgt gca ttt ggt gga cag agc ctc aag ttt gga aag      245
Lys Ile Tyr Gln Arg Ala Phe Gly Gly Gln Ser Leu Lys Phe Gly Lys
      55                      60                      65

ggc ggg cag gcc cat cgg tgc tgc tgt gtg gct gat cgg act ggc cac      293
Gly Gly Gln Ala His Arg Cys Cys Val Ala Asp Arg Thr Gly His
      70                      75                      80                      85

```


tgc cta ttg cac acc tta tat gga agg tct ctg cga tat gat acc agc 341
 Ser Leu Leu His Thr Leu Tyr Gly Arg Ser Leu Arg Tyr Asp Thr Ser
 90 95 100

tat ttt gtg gag tat ttt gcc ttg gat ctc ctg atg gag aat ggg gag 389
 Tyr Phe Val Glu Tyr Phe Ala Leu Asp Leu Leu Met Glu Asn Gly Glu
 105 110 115

tgc cgt ggt gtc atc gca ctg tgc ata gaa gtc gac gcg gcc gcg aat 437
 Cys Arg Gly Val Ile Ala Leu Cys Ile Glu Val Asp Ala Ala Ala Asn
 120 125 130

tgc gat cct cga gag atc tct ttt ttt ggg ttt ggt ggg gta tct tca 485
 Ser Asp Pro Arg Glu Ile Ser Phe Phe Gly Phe Gly Gly Val Ser Ser
 135 140 145

tca tgc aat aga tag ttgtatacat cagccgtcca aacttagtaa tcgtccacat 540
 Ser Ser Asn Arg *
 150

aatcgtgaga tgcacgtgat ctactatat gacagtgatc ttgataacgc acacatcagt 600

ggattgcata tataattagt agcgtctcat gctttacaga tgca 644

<210> 971
 <211> 5553
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (241) .. (3717)

<400> 971
 aaagcacctg cagctcccaa agtacctgtg acccccagag tctccagagc tccccaaaca 60
 cctgcagctc agaagggtgcc cacggatgca gggccaacct tggatgtagc cagacttctg 120
 agtgaggtcc agcctacatc aagggctagt gtctccttac tgaagggcca ggggcaggct 180
 ggaaggcagg gtccccagtc cagtggcacc ttggccctca gcagtaagca ccagtttcag 240

atg gag ggg ctc ctg ggg gct tgg gag ggg gcc cca agg cag cca cct 288
 Met Glu Gly Leu Leu Gly Ala Trp Glu Gly Ala Pro Arg Gln Pro Pro
 1 5 10 15

cgc cac ctg caa gcg aac agc aca gtg acc agc ttc cag agg tac cac 336
 Arg His Leu Gln Ala Asn Ser Thr Val Thr Ser Phe Gln Arg Tyr His
 20 25 30

gag gcc ctg aat aca ccc ttc gag ctg aac ctg tca ggg gaa cct gga 384
 Glu Ala Leu Asn Thr Pro Phe Glu Leu Asn Leu Ser Gly Glu Pro Gly
 35 40 45

aac cag ggg ttg cgg cga gtg gtc atc gat ggc agc agt gtg gcc atg 432
 Asn Gln Gly Leu Arg Arg Val Val Ile Asp Gly Ser Ser Val Ala Met
 50 55 60

gtg cat ggc ctg cag cac ttc ttc tcc tgc cga gga att gcc atg gca 480
 Val His Gly Leu Gln His Phe Phe Ser Cys Arg Gly Ile Ala Met Ala
 65 70 75 80

gtg cag ttt ttc tgg aac cgg gga cac cga gag gtc act gtg ttt gta	528
Val Gln Phe Phe Trp Asn Arg Gly His Arg Glu Val Thr Val Phe Val	
85 90 95	
ccc acc tgg cag ctg aag aag aac cgg agg gtg aga gag agc cac ttt	576
Pro Thr Trp Gln Leu Lys Lys Asn Arg Arg Val Arg Glu Ser His Phe	
100 105 110	
ctg acg aag cta cac tcg ctc aag atg ctt tca atc aca ccc tcc cag	624
Leu Thr Lys Leu His Ser Leu Lys Met Leu Ser Ile Thr Pro Ser Gln	
115 120 125	
ctt gag aat ggc aag aag atc acc acc tac gat tat agg ttc atg gta	672
Leu Glu Asn Gly Lys Lys Ile Thr Thr Tyr Asp Tyr Arg Phe Met Val	
130 135 140	
aag ctg gca gag gag aca gat ggc atc att gtc acc aat gag cag att	720
Lys Leu Ala Glu Glu Thr Asp Gly Ile Ile Val Thr Asn Glu Gln Ile	
145 150 155 160	
cac atc ctg atg aat agt tcc aag aaa ctg atg gtc aaa gat cgc ttg	768
His Ile Leu Met Asn Ser Ser Lys Lys Leu Met Val Lys Asp Arg Leu	
165 170 175	
ctg cct ttc acc ttt gcg ggg aat ctc ttc atg gtg cct gat gac ccc	816
Leu Pro Phe Thr Phe Ala Gly Asn Leu Phe Met Val Pro Asp Asp Pro	
180 185 190	
ctg ggc cgt gat ggc ccc acc ttg gat gag ttt ctg aag aag cca aac	864
Leu Gly Arg Asp Gly Pro Thr Leu Asp Glu Phe Leu Lys Lys Pro Asn	
195 200 205	
agg ttg gac act gac att ggc aac ttc ctg aag gtg tgg aag acc ctt	912
Arg Leu Asp Thr Asp Ile Gly Asn Phe Leu Lys Val Trp Lys Thr Leu	
210 215 220	
cct ccc agc tca gcc agt gtc act gag ctg agt gat gac gct gac tct	960
Pro Pro Ser Ser Ala Ser Val Thr Glu Leu Ser Asp Asp Ala Asp Ser	
225 230 235 240	
ggg ccc ctg gag agt ctg ccg aat atg gaa gaa gtc agg gaa gag aag	1008
Gly Pro Leu Glu Ser Leu Pro Asn Met Glu Glu Val Arg Glu Glu Lys	
245 250 255	
gag gag agg cag gat gag gag cag aga cag ggg cag ggc aca cag aag	1056
Glu Glu Arg Gln Asp Glu Glu Gln Arg Gln Gly Gln Gly Thr Gln Lys	
260 265 270	
gcg gct gag gag gac gac ctt gac tct tcg ctg gcg tca gtg ttc agg	1104
Ala Ala Glu Glu Asp Asp Leu Asp Ser Ser Leu Ala Ser Val Phe Arg	
275 280 285	
gtg gag tgc ccg tcc ctt tcg gag gag atc ctg cgg tgc ctc agc ctc	1152
Val Glu Cys Pro Ser Leu Ser Glu Glu Ile Leu Arg Cys Leu Ser Leu	
290 295 300	
cat gat ccc cct gat ggg gcc ctg gac atc gac ctc ctg cca ggg gca	1200
His Asp Pro Pro Asp Gly Ala Leu Asp Ile Asp Leu Leu Pro Gly Ala	
305 310 315 320	
gct tct ccc tac ctg ggc atc ccc tgg gat gga aag gct ccc tgc cag	1248
Ala Ser Pro Tyr Leu Gly Ile Pro Trp Asp Gly Lys Ala Pro Cys Gln	
325 330 335	

cag gtt ctt gcc cac ctg gcc cag ctc acc atc ccc agc aac ttc acc	1296
Gln Val Leu Ala His Leu Ala Gln Leu Thr Ile Pro Ser Asn Phe Thr	
340 345 350	
gca ctc tcc ttc ttc atg ggc ttc atg gac tcc cac agg gat gcc atc	1344
Ala Leu Ser Phe Phe Met Gly Phe Met Asp Ser His Arg Asp Ala Ile	
355 360 365	
cct gac tat gaa gcc cta gtg ggc ccc ctg cac agc ctc ctc aag cag	1392
Pro Asp Tyr Glu Ala Leu Val Gly Pro Leu His Ser Leu Leu Lys Gln	
370 375 380	
aag cct gac tgg cag tgg gac cag gag cat gag gag gcc ttc ctg gcc	1440
Lys Pro Asp Trp Gln Trp Asp Gln Glu His Glu Glu Ala Phe Leu Ala	
385 390 395 400	
ctg aag cga gcc ctg gtg tct gcc ctc tgc ctg atg gcc ccc aac tcc	1488
Leu Lys Arg Ala Leu Val Ser Ala Leu Cys Leu Met Ala Pro Asn Ser	
405 410 415	
cag ctg ccc ttc cgc ctg gag gtg acc gtg agc cac gtg gcc ctg acg	1536
Gln Leu Pro Phe Arg Leu Glu Val Thr Val Ser His Val Ala Leu Thr	
420 425 430	
gcc atc ctc cat cag gag cac tca ggg agg aag cac ccc ata gcc tat	1584
Ala Ile Leu His Gln Glu His Ser Gly Arg Lys His Pro Ile Ala Tyr	
435 440 445	
acc tca aaa ccc ctc ctc cct gat gag gag agc cag ggc ccc cag tca	1632
Thr Ser Lys Pro Leu Leu Pro Asp Glu Glu Ser Gln Gly Pro Gln Ser	
450 455 460	
ggg ggt gac agc ccc tat gct gtg gcc tgg gcc ctc aag cat ttt tcc	1680
Gly Gly Asp Ser Pro Tyr Ala Val Ala Trp Ala Leu Lys His Phe Ser	
465 470 475 480	
cgc tgc att gga gac acc ccg gtg gtc ctg gac ctt tcc tat gcc tcc	1728
Arg Cys Ile Gly Asp Thr Pro Val Val Leu Asp Leu Ser Tyr Ala Ser	
485 490 495	
cgg acc act gcg gac cct gag gtg cgg gag ggc cgc agg gtt tcc aaa	1776
Arg Thr Thr Ala Asp Pro Glu Val Arg Glu Gly Arg Arg Val Ser Lys	
500 505 510	
gct tgg ttg atc cga tgg tcc ctc ttg gtt cag gac aaa ggc aag agg	1824
Ala Trp Leu Ile Arg Trp Ser Leu Leu Val Gln Asp Lys Gly Lys Arg	
515 520 525	
gcc ctg gaa ttg gcc ctc ctc cag ggc ctg ctg ggg gag aac cgc ctg	1872
Ala Leu Glu Leu Ala Leu Leu Gln Gly Leu Leu Gly Glu Asn Arg Leu	
530 535 540	
ctc acc ccc gcg gcc tcc atg cct cgc ttc ttc cag gtt ctg ccg cct	1920
Leu Thr Pro Ala Ala Ser Met Pro Arg Phe Phe Gln Val Leu Pro Pro	
545 550 555 560	
ttc tct gac ctg tcc acg ttc gtc tgc atc cac atg tcg ggc tac tgc	1968
Phe Ser Asp Leu Ser Thr Phe Val Cys Ile His Met Ser Gly Tyr Cys	
565 570 575	
ttc tac cgt gag gat gag tgg tgt gct ggc ttt ggt ctc tat gtt cta	2016
Phe Tyr Arg Glu Asp Glu Trp Cys Ala Gly Phe Gly Leu Tyr Val Leu	
580 585 590	

tcg ccc acc agc ccc cct gtc tcc ctt tcc ttc tcc tgc tcc cct tac	2064
Ser Pro Thr Ser Pro Pro Val Ser Leu Ser Phe Ser Cys Ser Pro Tyr	
595 600 605	
acg cca acc tat gcc cac ctg gca gcc gtg gcc tgc ggc ctg gag cgc	2112
Thr Pro Thr Tyr Ala His Leu Ala Ala Val Ala Cys Gly Leu Glu Arg	
610 615 620	
ttt ggc cag tcc cca ctc cca gtg gtt ttc ctc act cac tgc aac tgg	2160
Phe Gly Gln Ser Pro Leu Pro Val Val Phe Leu Thr His Cys Asn Trp	
625 630 635 640	
atc ttc agc ctc ctg tgg gag ctc ctg ccc ctc tgg agg gct cgg ggc	2208
Ile Phe Ser Leu Leu Trp Glu Leu Leu Pro Leu Trp Arg Ala Arg Gly	
645 650 655	
ttc ctc tcc tct gat ggg gct cca ctc cct cac cca agc ctg ctc tcc	2256
Phe Leu Ser Ser Asp Gly Ala Pro Leu Pro His Pro Ser Leu Leu Ser	
660 665 670	
tac att ata tcc ctc acc tct ggc ctc tca tcc ctt ccg ttt atc tac	2304
Tyr Ile Ile Ser Leu Thr Ser Gly Leu Ser Ser Leu Pro Phe Ile Tyr	
675 680 685	
cga acc tcc tac cgg ggc tct ctg ttt gct gtg aca gtg gac acc ctg	2352
Arg Thr Ser Tyr Arg Gly Ser Leu Phe Ala Val Thr Val Asp Thr Leu	
690 695 700	
gcc aag cag ggt gcc cag ggg ggt ggg cag tgg tgg agt ttg cca aag	2400
Ala Lys Gln Gly Ala Gln Gly Gly Gly Gln Trp Trp Ser Leu Pro Lys	
705 710 715 720	
gat gtg cca gcc cct aca gtg agt ccc cat gcc atg ggc aag agg ccc	2448
Asp Val Pro Ala Pro Thr Val Ser Pro His Ala Met Gly Lys Arg Pro	
725 730 735	
aat ttg ctg gca tta cag ctg agt gac agc acc ctg gcc gac atc att	2496
Asn Leu Leu Ala Leu Gln Leu Ser Asp Ser Thr Leu Ala Asp Ile Ile	
740 745 750	
gcc agg ctg cag gct ggg cag aaa ctg tct ggc tcc tca ccg ttt agt	2544
Ala Arg Leu Gln Ala Gly Gln Lys Leu Ser Gly Ser Ser Pro Phe Ser	
755 760 765	
tct gcc ttt aac tca ctc agc ctc gac aag gag agt ggc ctg ctt atg	2592
Ser Ala Phe Asn Ser Leu Ser Leu Asp Lys Glu Ser Gly Leu Leu Met	
770 775 780	
ttc aag gga gat aag aag ccc agg gtc tgg gta gtc ccg acg caa ctc	2640
Phe Lys Gly Asp Lys Lys Pro Arg Val Trp Val Val Pro Thr Gln Leu	
785 790 795 800	
cgg agg gat ctg att ttc tct gtg cat gac att ccc ttg ggg gcc cac	2688
Arg Arg Asp Leu Ile Phe Ser Val His Asp Ile Pro Leu Gly Ala His	
805 810 815	
cag agg ccc gaa gag acc tac aag aag ttg cgt ttg ctg ggg tgg tgg	2736
Gln Arg Pro Glu Glu Thr Tyr Lys Lys Leu Arg Leu Leu Gly Trp Trp	
820 825 830	
cct ggg atg cag gag cat gtg aaa gat tac tgc agg agc tgc ttg ttc	2784
Pro Gly Met Gln Glu His Val Lys Asp Tyr Cys Arg Ser Cys Leu Phe	
835 840 845	

tgc atc ccc cga aat ctc ata ggc agc gag ttg aag gtt att gag tcc Cys Ile Pro Arg Asn Leu Ile Gly Ser Glu Leu Lys Val Ile Glu Ser 850 855 860	2832
cca tgg ccc ctc agg tcg acc gcc ccc tgg tcg aac ctg cag atc gag Pro Trp Pro Leu Arg Ser Thr Ala Pro Trp Ser Asn Leu Gln Ile Glu 865 870 875 880	2880
gtg gtg ggc ccg gtc acc ata agt gag gag ggc cat aag cat gta ctt Val Val Gly Pro Val Thr Ile Ser Glu Glu Gly His Lys His Val Leu 885 890 895	2928
att gtg gct gac cca aac acc agg tgg gtg gag gca ttc ccc ctg aag Ile Val Ala Asp Pro Asn Thr Arg Trp Val Glu Ala Phe Pro Leu Lys 900 905 910	2976
ccc tac aca cac acg gct gtg gcc cag gtg ctg ctt cag cat gtg ttt Pro Tyr Thr His Thr Ala Val Ala Gln Val Leu Leu Gln His Val Phe 915 920 925	3024
gca agg tgg ggt gtt cct gtg agg ctg gag gca gcc cag ggg ccc cag Ala Arg Trp Gly Val Pro Val Arg Leu Glu Ala Ala Gln Gly Pro Gln 930 935 940	3072
ttt gcc cgg cac gtc ctt gtg agc tgt ggg ctg gcc ctg gga gcc cag Phe Ala Arg His Val Leu Val Ser Cys Gly Leu Ala Leu Gly Ala Gln 945 950 955 960	3120
gtg gcc tcc ctg agt cgg gac ctc cag ttc ccc tgc ctg acg agc tca Val Ala Ser Leu Ser Arg Asp Leu Gln Phe Pro Cys Leu Thr Ser Ser 965 970 975	3168
ggg gcc tac tgg gaa ttc aag agg gcc ctc aag gag ttc atc ttc ctg Gly Ala Tyr Trp Glu Phe Lys Arg Ala Leu Lys Glu Phe Ile Phe Leu 980 985 990	3216
cat ggg aag aag tgg gcg gcc tcc ctg cct ttg ctg cac ctg gcc ttc His Gly Lys Lys Trp Ala Ala Ser Leu Pro Leu Leu His Leu Ala Phe 995 1000 1005	3264
agg gcc tcc tcc act gat gcc aca ccg ttc aag gtc ctg acc ggg ggt Arg Ala Ser Ser Thr Asp Ala Thr Pro Phe Lys Val Leu Thr Gly Gly 1010 1015 1020	3312
gag tca agg ctc acg gag ccc ctg tgg tgg gag atg agc agc gca aac Glu Ser Arg Leu Thr Glu Pro Leu Trp Trp Glu Met Ser Ser Ala Asn 1025 1030 1035 1040	3360
att gaa ggg ctc aag atg gac gtc ttc ctg cta cag ctg gtg ggg gag Ile Glu Gly Leu Lys Met Asp Val Phe Leu Leu Gln Leu Val Gly Glu 1045 1050 1055	3408
ctg ctg gag ctc cac tgg agg gtg gct gac aag gcg agt gaa aag gcc Leu Leu Glu Leu His Trp Arg Val Ala Asp Lys Ala Ser Glu Lys Ala 1060 1065 1070	3456
gag aac agg cgt ttc aag cgg gag agc cag gag aag gag tgg aat gtg Glu Asn Arg Arg Phe Lys Arg Glu Ser Gln Glu Lys Glu Trp Asn Val 1075 1080 1085	3504
ggt gac cag gtc ctt ttg ctg tcc ctc ccc agg aat ggc agc agt gcc Gly Asp Gln Val Leu Leu Ser Leu Pro Arg Asn Gly Ser Ser Ala 1090 1095 1100	3552

aaa tgg gtg ggt ccc ttc tat atc ggg gac cgg ctg agc ctg tca ctc 3600
 Lys Trp Val Gly Pro Phe Tyr Ile Gly Asp Arg Leu Ser Leu Ser Leu
 1105 1110 1115 1120

tat agg ata tgg ggc ttc cca acc cca gag aag ctg ggg tgc atc tat 3648
 Tyr Arg Ile Trp Gly Phe Pro Thr Pro Glu Lys Leu Gly Cys Ile Tyr
 1125 1130 1135

ccc agc agt ctg atg aag gcc ttt gcc aag agt ggc acc ccg ctg tcc 3696
 Pro Ser Ser Leu Met Lys Ala Phe Ala Lys Ser Gly Thr Pro Leu Ser
 1140 1145 1150

ttc aag gtc ttg gag cag tga gc gggagcagcg ggggtgcccc ctgccccagg 3749
 Phe Lys Val Leu Glu Gln *
 1155

gccgtgggtt tctgctgcta ggcctcccc tgtcccagca gtgctctcag tccactgggg 3809

gccctcagtt gtgccttttg tagagaactt gcttcataaa gctttgctga attgccttga 3869

actagggacc agcatcccca tggaaacatc cccagtttgg ggtacttggga gaatttgcca 3929

aaggctgtca gatatgggtc cctggcagtt ttacactggg aaatagagtg ctctctagg 3989

ctataccagg ctcaagtgtct tctccccaag tctctcttt ccccttcaca tgtaggtgtg 4049

tgggtggtgtg cacacacact cacgaaagaa tctatcttgg ccatgaaact gtggctgttg 4109

accttggaaat tgggaaccaca gtcccttccc atacagaaac cccaaatgtg ggctcctccc 4169

tccaacctgt tcttttgggg accctttgcc cttagagctg tcacagatga cataagcctg 4229

ggcaggtgtg ggggaggccg ctgcctccta gcctcacggt cagctttctc aagccagggtg 4289

tggcctgcac agctgtcagg gcagggctgg ccctcctccc aggcctcaag ggcagtgtct 4349

tggagtggga ggatggccag ccacaagcca ccagcttgtc agcatgggaa gggcaagggg 4409

gaaatgggtt ggcctacctc atttgactcc agccaatgga gacaattcct gaccctgtct 4469

ttgatggtgt tgacccaca ggaatcaagg atcttgatgc caagtgtggc atctctacct 4529

gaagagctgc ttctgttaga cccaggggcc cgggcctctg ttttaagggg gcagggcgtc 4589

tgcaacagga gtggcacacg gtgaagtgtc ggcatggctc tacctcccaa cccctcccaa 4649

ccccatccca aagcctacag tcctctgtc cttctacctc cactgtatcc tgcacccag 4709

acctacaga ttgtgtgatt gcttcactct tatcaccccc cgagtcctgt ggacctgct 4769

tctgtgtaga gcaaaaccca ggctccctca cagccattct ttgcagagat cacccttgca 4829

gtgagtgtga gttccttcca ggtgtgtgcg cgtacactca ccctctgaat tgctgccgt 4889

gccaaggaag tgggctccag gtgaaggcca gtgccacgtc actctggctg gccttcttag 4949

tagtttcatt tctccggaag ctgagccagt ctctgtgtct agcccagggt gccagaacgc 5009

ttggcattgc agagtgttag agccagtgga gaacttgcca acttgattgt ttacagcag 5069

aggaaagagg atcacagagg gaaagtgatt cacccaaagt cacacagcaa gttcatggct 5129

gagctgagac caggattaag ctctctgact cccagttcac catgaaaagg gttctggcaa 5189

cagggttcaag ctggagaatc cttcaaaatg ctacacccac attctctcca actcttcac 5249
 tccctgatct tccagacaaa ctacctggat gttgccctta aaccatttct agctgttaac 5309
 cctatccaga aaaatgattg agtgatagct gagaagtgga aagtgtggga tttttggcag 5369
 gtgctctctt tctctcgccc ccgcgcctat cctttctctt cctctctctt gtaatggat 5429
 gtccagcctc actctccctc cctgggtgctg tatgcgttcc cctgttagc tacatttgctg 5489
 atcacatacc cttcttttaa gtgaattttt ttcatttgat ttgtcaataa acgaatcaaa 5549
 ctgg 5553

<210> 972
 <211> 1881
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)..(1824)

<400> 972
 atg gga agt gtc aca gtt cgg tat ttc tgt tat ggg tgc ctt ttt aca 48
 Met Gly Ser Val Thr Val Arg Tyr Phe Cys Tyr Gly Cys Leu Phe Thr
 1 5 10 15
 tct gcg acc tgg aca gtt ttg ctt ttt gtt tat ttc aac ttc agt gaa 96
 Ser Ala Thr Trp Thr Val Leu Leu Phe Val Tyr Phe Asn Phe Ser Glu
 20 25 30
 gtg act cag cca ctt aag aat gtg ccc gtc aag ggg tct ggg ccc cac 144
 Val Thr Gln Pro Leu Lys Asn Val Pro Val Lys Gly Ser Gly Pro His
 35 40 45
 gga cca tct cca aaa aaa ttc tat ccc cgt ttc act cga ggc cca agt 192
 Gly Pro Ser Pro Lys Lys Phe Tyr Pro Arg Phe Thr Arg Gly Pro Ser
 50 55 60
 cga gtg ctc gag cca cag ttc aaa gca aac aaa att gac gat gtg ata 240
 Arg Val Leu Glu Pro Gln Phe Lys Ala Asn Lys Ile Asp Asp Val Ile
 65 70 75 80
 gac agt cgt gtt gaa gat cca gaa gaa ggc cac ttg aaa ttc tct tct 288
 Asp Ser Arg Val Glu Asp Pro Glu Glu Gly His Leu Lys Phe Ser Ser
 85 90 95
 gaa tta ggt atg att ttt aat gaa cgc gat caa gag ttg aga gac ttg 336
 Glu Leu Gly Met Ile Phe Asn Glu Arg Asp Gln Glu Leu Arg Asp Leu
 100 105 110
 ggc tat cag aaa cat gct ttt aat atg ctt atc agt gac cgc ttg ggc 384
 Gly Tyr Gln Lys His Ala Phe Asn Met Leu Ile Ser Asp Arg Leu Gly
 115 120 125
 tac cac aga gat gtg cca gac aca agg aat gca gcg tgt aaa gaa aag 432
 Tyr His Arg Asp Val Pro Asp Thr Arg Asn Ala Ala Cys Lys Glu Lys
 130 135 140

ttc tac cca cct gac ctg cca gct gct agt gtt gtt atc tgt ttc tat	480
Phe Tyr Pro Pro Asp Leu Pro Ala Ala Ser Val Val Ile Cys Phe Tyr	
145 150 155 160	
aat gaa gcg ttt tct gcc ttg ctt cgg aca gtg cac agt gtc ata gac	528
Asn Glu Ala Phe Ser Ala Leu Leu Arg Thr Val His Ser Val Ile Asp	
165 170 175	
cgc acg cca gca cac ctg ctt cat gag atc atc ctt gtg gat gat gat	576
Arg Thr Pro Ala His Leu Leu His Glu Ile Ile Leu Val Asp Asp Asp	
180 185 190	
agt gac ttt gat gat ttg aaa gga gaa cta gat gaa tat gtc caa aaa	624
Ser Asp Phe Asp Asp Leu Lys Gly Glu Leu Asp Glu Tyr Val Gln Lys	
195 200 205	
tac ctc cct gga aaa att aaa gtc ata aga aat aca aag cgt gag ggg	672
Tyr Leu Pro Gly Lys Ile Lys Val Ile Arg Asn Thr Lys Arg Glu Gly	
210 215 220	
ttg att cga ggg aga atg att ggc gcg gcc cac gcg aca gga gaa gtc	720
Leu Ile Arg Gly Arg Met Ile Gly Ala Ala His Ala Thr Gly Glu Val	
225 230 235 240	
ctt gtg ttc ctg gac agc cac tgt gaa gtg aat gtg atg tgg ctg cag	768
Leu Val Phe Leu Asp Ser His Cys Glu Val Asn Val Met Trp Leu Gln	
245 250 255	
ccc ttg ctg gcc gcc atc cgt gag gac cgg cac acc gtg gtg tgc cca	816
Pro Leu Leu Ala Ala Ile Arg Glu Asp Arg His Thr Val Val Cys Pro	
260 265 270	
gtg att gac atc atc agc gcc gac acg ctg gcc tac agc tcg tcc cct	864
Val Ile Asp Ile Ile Ser Ala Asp Thr Leu Ala Tyr Ser Ser Ser Pro	
275 280 285	
gtc gtc cgc gga ggg ttc aac tgg gga ctg cac ttc aaa tgg gat ctt	912
Val Val Arg Gly Gly Phe Asn Trp Gly Leu His Phe Lys Trp Asp Leu	
290 295 300	
gtc ccc ctt tct gag cta gga cga gcg gag gga gcc act gca cca ata	960
Val Pro Leu Ser Glu Leu Gly Arg Ala Glu Gly Ala Thr Ala Pro Ile	
305 310 315 320	
aag tca cca aca atg gct gga ggt ttg ttt gcc atg aac aga cag tat	1008
Lys Ser Pro Thr Met Ala Gly Gly Leu Phe Ala Met Asn Arg Gln Tyr	
325 330 335	
ttc cat gaa ctt gga cag tat gat agt ggc atg gat atc tgg gga gga	1056
Phe His Glu Leu Gly Gln Tyr Asp Ser Gly Met Asp Ile Trp Gly Gly	
340 345 350	
gaa aat ttg gaa ata tca ttt cgg atc tgg atg tgt ggc ggt aag ctc	1104
Glu Asn Leu Glu Ile Ser Phe Arg Ile Trp Met Cys Gly Gly Lys Leu	
355 360 365	
ttc atc atc cct tgc tct aga gta gga cac att ttc cga aaa agg cga	1152
Phe Ile Ile Pro Cys Ser Arg Val Gly His Ile Phe Arg Lys Arg Arg	
370 375 380	
cca tat gga tct ccc gaa ggc cag gac acc atg aca cac aac tct ttg	1200
Pro Tyr Gly Ser Pro Glu Gly Gln Asp Thr Met Thr His Asn Ser Leu	
385 390 395 400	


```

cgg ctg gca cat gtc tgg ttg gat gaa tac aag gag cag tat ttt tcc      1248
Arg Leu Ala His Val Trp Leu Asp Glu Tyr Lys Glu Gln Tyr Phe Ser
                405                      410                      415

tta aga cct gac ctg aag acg aaa agc tat ggc aat atc agt gag cgt      1296
Leu Arg Pro Asp Leu Lys Thr Lys Ser Tyr Gly Asn Ile Ser Glu Arg
                420                      425                      430

gtg gaa ctg aga aag aag ttg ggc tgt aaa tca ttt aaa tgg tat ttg      1344
Val Glu Leu Arg Lys Lys Leu Gly Cys Lys Ser Phe Lys Trp Tyr Leu
                435                      440                      445

gat aat gta tac cca gag atg cag ata tct ggg tcc cac gcc aaa ccc      1392
Asp Asn Val Tyr Pro Glu Met Gln Ile Ser Gly Ser His Ala Lys Pro
                450                      455                      460

caa caa ccc att ttt gtc aat aga ggg cca aaa cga ccc aaa gtc ctt      1440
Gln Gln Pro Ile Phe Val Asn Arg Gly Pro Lys Arg Pro Lys Val Leu
                465                      470                      475                      480

caa cgt gga agg ctc tat cac ctc cag acc aac aaa tgc ctg gtg gcc      1488
Gln Arg Gly Arg Leu Tyr His Leu Gln Thr Asn Lys Cys Leu Val Ala
                485                      490                      495

cag ggc cgc cca agt cag aag gga ggt ctc gtg gtg ctt aag gcc tgt      1536
Gln Gly Arg Pro Ser Gln Lys Gly Gly Leu Val Val Leu Lys Ala Cys
                500                      505                      510

gac tac agt gac cca aat cag atc tgg atc tat aat gaa gag cat gaa      1584
Asp Tyr Ser Asp Pro Asn Gln Ile Trp Ile Tyr Asn Glu Glu His Glu
                515                      520                      525

ttg gtt tta aat agt ctc ctt tgt cta gat atg tca gag act cgc tca      1632
Leu Val Leu Asn Ser Leu Leu Cys Leu Asp Met Ser Glu Thr Arg Ser
                530                      535                      540

tca gac ccg cca cgg ctc atg aaa tgc cac ggg tca gga gga tcc cag      1680
Ser Asp Pro Pro Arg Leu Met Lys Cys His Gly Ser Gly Gly Ser Gln
                545                      550                      555                      560

cag tgg acc ttt ggg aaa aac aat cgg cta tac cag gtg tcg gtt gga      1728
Gln Trp Thr Phe Gly Lys Asn Asn Arg Leu Tyr Gln Val Ser Val Gly
                565                      570                      575

cag tgc ctg aga gca gtg gat ccc ctg ggt cag aag ggc tct gtc gcc      1776
Gln Cys Leu Arg Ala Val Asp Pro Leu Gly Gln Lys Gly Ser Val Ala
                580                      585                      590

atg gcg atc tgc gat ggc tcc tct tca cag cag tgg cat ttg gaa ggt      1824
Met Ala Ile Cys Asp Gly Ser Ser Ser Gln Gln Trp His Leu Glu Gly
                595                      600                      605

taaggtggat gctgtggcgg gaacgttgct tcatcaggcg ttgcctccgg tgtggag      1881

```

<210> 973
 <211> 5814
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS

<222> (24) .. (2924)

<400> 973

```

aggtcttaaaa atggaatat gaa      atg ttt ttg aac ttt ggt cag tgt ggg      50
                               Met Phe Leu Asn Phe Gly Gln Cys Gly
                               1                               5

ccc cct gca agt ctt tgt cag tcc atc tca aga cct gtg cct gtc aga      98
Pro Pro Ala Ser Leu Cys Gln Ser Ile Ser Arg Pro Val Pro Val Arg
 10                               15                               20                               25

ttt cac aat tat gga gat tat ttt aat gtt ttt ttc cct ttg atg gta      146
Phe His Asn Tyr Gly Asp Tyr Phe Asn Val Phe Phe Pro Leu Met Val
                               30                               35                               40

ttg aat act ttt gaa aca gtg gca caa gaa tgg ctc aac tct cca aat      194
Leu Asn Thr Phe Glu Thr Val Ala Gln Glu Trp Leu Asn Ser Pro Asn
                               45                               50                               55

aga gag aat ttc tat cag ttg caa gta cga aaa ttt cct gcc gat tat      242
Arg Glu Asn Phe Tyr Gln Leu Gln Val Arg Lys Phe Pro Ala Asp Tyr
                               60                               65                               70

ata aaa tac tgg gag ttt gca gtt tat ctg gaa gaa tgt gaa ctg gct      290
Ile Lys Tyr Trp Glu Phe Ala Val Tyr Leu Glu Glu Cys Glu Leu Ala
 75                               80                               85

aaa cag ctt tat cca aag gaa aac gat ttg gtg ttt tta gct cct gag      338
Lys Gln Leu Tyr Pro Lys Glu Asn Asp Leu Val Phe Leu Ala Pro Glu
 90                               95                               100                               105

aga ata aat gaa gag aag aaa gat aca gag aga aat gac ata caa gat      386
Arg Ile Asn Glu Glu Lys Lys Asp Thr Glu Arg Asn Asp Ile Gln Asp
                               110                               115                               120

ctc cac gaa tat cat tct ggt tat gtt cat aaa ttt cgc cgc acg tca      434
Leu His Glu Tyr His Ser Gly Tyr Val His Lys Phe Arg Arg Thr Ser
                               125                               130                               135

gtc atg cgt aat ggg aaa act gag tgt tac ctt tcc atc cag act caa      482
Val Met Arg Asn Gly Lys Thr Glu Cys Tyr Leu Ser Ile Gln Thr Gln
                               140                               145                               150

gag aac ttt ccg gcc aat tta aac gaa ctt gtg aat tgt att gta atc      530
Glu Asn Phe Pro Ala Asn Leu Asn Glu Leu Val Asn Cys Ile Val Ile
                               155                               160                               165

agt tct ctg gta act aca caa agg aag ttg aaa gcc atg tct ctg ttg      578
Ser Ser Leu Val Thr Thr Gln Arg Lys Leu Lys Ala Met Ser Leu Leu
170                               175                               180                               185

ggt agt cgg aac caa ctg gct aga gct gtt ctg aat cca aac cct atg      626
Gly Ser Arg Asn Gln Leu Ala Arg Ala Val Leu Asn Pro Asn Pro Met
                               190                               195                               200

gac ttc tgt aca aaa gat tta ctg act aca aca tct gag aga att att      674
Asp Phe Cys Thr Lys Asp Leu Leu Thr Thr Thr Ser Glu Arg Ile Ile
                               205                               210                               215

gcg tac tta aga gat ttc aat gaa gat caa aag aaa gca ata gaa act      722
Ala Tyr Leu Arg Asp Phe Asn Glu Asp Gln Lys Lys Ala Ile Glu Thr
                               220                               225                               230

gca tat gct atg gtg aaa cac tca cca tca gtt gcc aaa atc tgc ttg      770

```

2696

2697

His Asp Ala Val	Lys Ile Leu Lys Leu Lys Pro Val Leu Gln Arg Ser	
750	755	760
ctc act cac cct cct acc ata gcc cca gag ggg tcc aga ccc cag ggt		2354
Leu Thr His Pro Pro Thr Ile Ala Pro Glu Gly Ser Arg Pro Gln Gly		
765	770	775
ggt ttg ccc agc agc aag cta gac agt gga ttt gcc aag aca tct gtt		2402
Gly Leu Pro Ser Ser Lys Leu Asp Ser Gly Phe Ala Lys Thr Ser Val		
780	785	790
gct gct tct cta tac cac aca ccc tct gac tcc aag gaa att act ctt		2450
Ala Ala Ser Leu Tyr His Thr Pro Ser Asp Ser Lys Glu Ile Thr Leu		
795	800	805
act gtt act tca aag gac cct gaa aga cct cct gtt cat gac caa ctt		2498
Thr Val Thr Ser Lys Asp Pro Glu Arg Pro Pro Val His Asp Gln Leu		
810	815	820
cag gac cca cga ctg ctg aag agg atg ggc att gag gtc aaa gga gga		2546
Gln Asp Pro Arg Leu Lys Arg Met Gly Ile Glu Val Lys Gly Gly		
830	835	840
ata ttc ctt tgg gat cca caa ccc tcg agc ccc cag cat cct gga gca		2594
Ile Phe Leu Trp Asp Pro Gln Pro Ser Ser Pro Gln His Pro Gly Ala		
845	850	855
aca cct cct acg ggc gag ccg ggc ttc cct gtc gtt cac cag gac ctg		2642
Thr Pro Pro Thr Gly Glu Pro Gly Phe Pro Val Val His Gln Asp Leu		
860	865	870
agc cat ata cag cag ccc gct gct gta gtg gct gct ctg agc agc cac		2690
Ser His Ile Gln Gln Pro Ala Ala Val Val Ala Ala Leu Ser Ser His		
875	880	885
aaa cct ccc gtg cgg ggc gaa cct cca gct gcc agt ccc gag gct tcc		2738
Lys Pro Pro Val Arg Gly Glu Pro Pro Ala Ala Ser Pro Glu Ala Ser		
890	895	900
acg tgt cag agc aaa tgt gat gac ccg gaa gag gag ctc tgt cac agg		2786
Thr Cys Gln Ser Lys Cys Asp Asp Pro Glu Glu Glu Leu Cys His Arg		
910	915	920
aga gag gcc agg gct ttc agt gaa ggg gag cag gag aag tgt ggt tcc		2834
Arg Glu Ala Arg Ala Phe Ser Glu Gly Glu Gln Glu Lys Cys Gly Ser		
925	930	935
gag acc cat cac acc agg agg aac tct agg tgg gac aag agg aca ctg		2882
Glu Thr His His Thr Arg Arg Asn Ser Arg Trp Asp Lys Arg Thr Leu		
940	945	950
gag cag gag gac agc agt tcc aag aaa aga aag ctt tta tag gaaagcc		2931
Glu Gln Glu Asp Ser Ser Lys Lys Arg Lys Leu Leu *		
955	960	965
cagtgcacatg ggccagcagc cacagcatat tgtaaaactga agatgaccag ctcgtgggac		2991
catctagata agcttggtttt ttgtaaggag tttgtgtgct gttggaaaac atggaaaatg		3051
catccttaac acctgagcct ctggtcacatc tcagtatttt ctgtcatttg caaaagcttt		3111
cagagggcat tgtgtatccg taataatgtc cttgaagtca gagactggaa atgttgatct		3171
cttagtcttc tatagacaag gaggtcagac tggagtgaat gttgtaaaag ttgaaatgta		3231

tatttgtata gcaaataaca aaatcctttt aaaatttaat ctagtagacc gcttttcttt 3291
ccccctgttt aaaatgttaa tcagttttca acagaacaaa ctttatatta ccaaaaaaaaa 3351
aaaagatggg aggagggcgg gtcctttcaa ccattgttag agcaagacag ataattattt 3411
aacagcctag cttggaataa gctgagttag tgctgggtgg tcaggtgtct ctggctctat 3471
taaaaaaagc aaaaaacccc ccaaaaacct ggagtctcct aggggacact ttgggcagca 3531
cggttatgtt aggtaaagtc ttgctgacat ggtgcatttt tagatagagt gcattggccc 3591
agggtattat atttctgtga tgagttcatt tacctgtttc agtatgcaca tagttcccta 3651
gctaaaattc ctaatcttct tgagagagaa gaatatggag tgaaagaata attcttgagc 3711
tatcattcaa atgctcccag catattgtga gccttggtg actggtgagg tacagacatt 3771
tggttgccaa atgctagatt agcgtgggt cagctgtgga agaatcgct cagcttacag 3831
attgtcagac agatctaact agttttccag aaagcctggg aagctgtgtg ttcaacattt 3891
cccaagggat tctgatcacc aggcagcttg ggaaccactg gggcaggcca aatagaatat 3951
tttgggcggg aaagaagcac ccgatttaaa atgaagcgta accagaggag ttcagaactg 4011
ggaagagagt ggtagacttc ctgtgatctt cagaaatcat ctacctggtg aaaatacatg 4071
ctgtttagaa tatctgatag gtgtttccag ctactattag aggtgatagt gcttttgtgg 4131
gggaaaaaat tggcatggt gaatggagat cgaggaagct cgggacaagg gaggggtggg 4191
ctgcctgatt ttgtccagtt ttccaaatat ccacgcagtg aactggagta tcctaaacat 4251
gagaatgtac agttgacagt tgtaaaaact agggatctgt aatgaatgct gtgcagcccc 4311
atatctcatt tgggggtagg aaaatagctg aagattcatg tgcattattt gacatttctt 4371
ttgtcatctg ctttttaagc aaaaaagggt tttgtgttag aaattctact tgagcagatt 4431
ataaagagct ttaaaaaaca actttcggtt gccaaaagtt tgagcatttg atttcattac 4491
ctgtgtctcc ctactgggtg tccagacggt caactgaata ctctgaaac ccaggagca 4551
ggtgacttcc tggagtgtct tgtcccaga gtcagccact gcttcctctg tgggggtgga 4611
gagtttgtct ttggccatgc agtgtgcgac agttcaggac gggtagggat ggggtccatt 4671
ctgtctgggt caagggtctt atcagcttct tccatgtgcc tttgggaaga aatctcgta 4731
ctttaagttt gctttctgt tatcttgatg aagtgccat tttagcagac acttgtagtg 4791
ctgaccactt agggaatgta caaactccta agcttctaaa gggagggcat gggcaaaaac 4851
gttgggtgca ggatgtctct cacgctgctc atgttaatac tattaacaca tgatttgaga 4911
aataagtttt ctctaaaatg catattttgc cgccacacac tgaacaatat tatttccagt 4971
gaagtttgat gcctgttctt acgttgtgtt cacctgttg ttcaccactc agcagatctg 5031
attctgcaag aattaatggt agaactagat catcctttct aacagacgag cctgtgtcct 5091
gtgacggcct ttcacagcgg aatgcagttg tacctcacat tacttttgaa acttcactcg 5151

```

ttccagttgg tacaagtatt tgccaaagcc atttcctatg ttcaccgtgg cccctcctga 5211
tgtggctgtc agcgcagcgt tgttgaacag ggctattcct tttacaaggt gtgaagtgtg 5271
gctcttcgct tcgtctttgc catggcatta aaagaaagtt ccctgtcttc tttcaatatt 5331
agttatttca aatgaatatg tgctacttaa aagcttggtt tgtttctttg tatataattt 5391
gccttggatt tattgtgcac agtttggtga gttgtatggt tttgtgaatt atcaggagta 5451
aatttgacaa gtacatgtga ataacctoct gtaaataaat tttataacaa aaatgtactg 5511
aactatTTTT taaagttgtg cagattagca attttttgc atagctttga cttttctatg 5571
ctgtgaatta atagctgcga tttggcaaac agccctgttg tctttgttaa accctaaatt 5631
ttaagaggaa atggcagaat taaaagcaga aacaagaaga tggacatgga ttagagggtta 5691
tgtattatga agtaaaactac aaggactaa catcatttcg tctgccattt ggtttgcctt 5751
atgctgaaat tacttggtgg ggatttgtgc aattcagata taaaaagttt cattatccaa 5811
aaa 5814

```

```

<210> 974
<211> 1960
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> CDS
<222> (1115) .. (1882)

```

```

<400> 974
aaactggcta agttggttgc tttttgggga ttagtcaaag agaccaaata ccatatcctc 60
gtccgactcc tccgactott ccttggttc aaccttagct ggggctgcag cagcagcagg 120
agcagctgtg gtggcagcag ccacaggggc agcagccaca aaggcagatg gatcagccaa 180
gaaggccttg accttttcag caagtgggaa ggtgtaatcc gtctccacag acaaggccag 240
gactcgtttg taccgcgttg tgatagaatg gggtagctgat gcaacagttg ggtagccaat 300
ctgcagacag aacttgcaa cattgcggac accctccagg aagcgagaat gcagagtttc 360
ctctgtgata tcaagcactt cagggttgta gatgctgcca ttgtcgaaca cctgctggat 420
gaccagccca aaggagaagg gggagatggt gagcatgttc agcagcgtgg ctctgctggc 480
tcccactttg tctccagtct tgatcagctg cacatcactc aggatttcaa tgggtcccct 540
ggagatttta gtggtgatac ctaaagcctg gaaaaaggag gtcttctcgg gcccgagacc 600
agtgttctgg gctggcacag tgacttcaca tggggcaatg gcaccagcac gggcagcagc 660
tggcacctta ttggccagca acatgtccct gatctcagtg aggtccctct tggatgaacac 720
aaagccacaa ttcccccgga tatgaggcag cagtttctcc agagctgggt tgttttccag 780

```

2701

200	205	210	
gct gct gcc cct gtg gct gct gcc acc aca gct gct cct gct gct gct			1804
Ala Ala Ala Pro Val Ala Ala Ala Thr Thr Ala Ala Pro Ala Ala Ala			
215	220	225	230
gca gcc cca gct aag gtt gaa gcc aag gaa gag tcg gag gag tcg gac			1852
Ala Ala Pro Ala Lys Val Glu Ala Lys Glu Glu Ser Glu Glu Ser Asp			
235	240		245
gag gat atg gga ttt ggt ctc ttt gac taa t caccaaaaag caaccaactt			1903
Glu Asp Met Gly Phe Gly Leu Phe Asp *			
250	255		
agccagtttt atttgcaaaa caaggaaata aaggcttact tctttaaaaa aaaaaa			1960

<210> 975
 <211> 1313
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (547)..(1239)

<400> 975	
tagatgtgtt accagagacg agccgcaaaa catttctcag tcttagtctc ttgtaaaata	60
gaggtaataa gaaacacttt tcagtatttt gtgacatgta gaagtaagtg atggtggcat	120
gcatcacact tggttaatag taggtcctgt tgttaagtct ctaatggcga taccctatgg	180
cttctccaaa tgggtgacctt gccaaattgt tttccaaagc gacatgtggc ttttttctcc	240
caatccctca ttttaactct catggtaatt taacttttat atttttatta gatgcattta	300
gtaacttgcc tcatagtcac tttcttgga attcaatttc ttctccacag ggtctctttt	360
gagattaaag agagagaagt ggcaaattta ggatgttaga ataattttca tttaaaagta	420
gacctctgtt tttattacc tatcattaat gttttctgtt ttcctttatc agcgagttac	480
tgctcatttg attcatattg ccaaactgaa ctctcttggt ttcttgcaag atgaaaggag	540
acaacc atg aat gag cca cta gac tat tta gca aat gct tct gat ttc	588
Met Asn Glu Pro Leu Asp Tyr Leu Ala Asn Ala Ser Asp Phe	
1 5 10	
ccc gat tat gca gct gct ttt gga aat tgc act gat gaa aac atc cca	636
Pro Asp Tyr Ala Ala Ala Phe Gly Asn Cys Thr Asp Glu Asn Ile Pro	
15 20 25 30	
ctc aag atg cac tac ctc cct gtt att tat ggc att atc ttc ctc gtg	684
Leu Lys Met His Tyr Leu Pro Val Ile Tyr Gly Ile Ile Phe Leu Val	
35 40 45	
gga ttt cca ggc aat gca gta gtg ata tcc act tac att ttc aaa atg	732
Gly Phe Pro Gly Asn Ala Val Val Ile Ser Thr Tyr Ile Phe Lys Met	
50 55 60	
aga cct tgg aag agc agc acc atc att atg ctg aac ctg gcc tgc aca	780

```
<210> 976
<211> 2751
<212> DNA
<213> Homo sapiens
```

<400> 976

2703

Ala	Ala	Leu	Asp	Pro	Ala	Tyr	Thr	Thr	Leu	Glu	Phe	Glu	Asn	Val	Gln		
			20					25					30				
gtg	ttg	acg	atg	ggc	aat	gac	acg	tcc	cca	tca	gaa	ggc	acc	aac	ctc		201
Val	Leu	Thr	Met	Gly	Asn	Asp	Thr	Ser	Pro	Ser	Glu	Gly	Thr	Asn	Leu		
		35					40					45					
aac	gcg	ccc	aac	agc	ctg	ggt	gtc	agc	gcc	ctg	tgt	gcc	atc	tgc	ggg		249
Asn	Ala	Pro	Asn	Ser	Leu	Gly	Val	Ser	Ala	Leu	Cys	Ala	Ile	Cys	Gly		
		50				55					60						
gac	cgg	gcc	acg	ggc	aaa	cac	tac	ggt	gcc	tcg	agc	tgt	gac	ggc	tgc		297
Asp	Arg	Ala	Thr	Gly	Lys	His	Tyr	Gly	Ala	Ser	Ser	Cys	Asp	Gly	Cys		
		65			70				75						80		
aag	ggc	ttc	ttc	cgg	agg	agc	gtg	cgg	aag	aac	cac	atg	tac	tcc	tgc		345
Lys	Gly	Phe	Phe	Arg	Arg	Ser	Val	Arg	Lys	Asn	His	Met	Tyr	Ser	Cys		
				85					90					95			
aga	ttt	agc	cgg	cag	tgc	gtg	gtg	gac	aaa	gac	aag	agg	aac	cag	tgc		393
Arg	Phe	Ser	Arg	Gln	Cys	Val	Val	Asp	Lys	Asp	Lys	Arg	Asn	Gln	Cys		
			100					105					110				
cgc	tac	tgc	agg	ctc	aag	aaa	tgc	ttc	cgg	gct	ggc	atg	aag	aag	gaa		441
Arg	Tyr	Cys	Arg	Leu	Lys	Lys	Cys	Phe	Arg	Ala	Gly	Met	Lys	Lys	Glu		
		115					120					125					
gcc	gtc	cag	aat	gag	cgg	gac	cgg	atc	agc	act	cga	agg	tca	agc	tat		489
Ala	Val	Gln	Asn	Glu	Arg	Asp	Arg	Ile	Ser	Thr	Arg	Arg	Ser	Ser	Tyr		
		130				135					140						
gag	gac	agc	agc	ctg	ccc	tcc	atc	aat	gcg	ctc	ctg	cag	gcg	gag	gtc		537
Glu	Asp	Ser	Ser	Leu	Pro	Ser	Ile	Asn	Ala	Leu	Leu	Gln	Ala	Glu	Val		
				145		150				155				160			
ctg	tcc	cga	cag	atc	acc	tcc	ccc	gtc	tcc	ggg	atc	aac	ggc	gac	att		585
Leu	Ser	Arg	Gln	Ile	Thr	Ser	Pro	Val	Ser	Gly	Ile	Asn	Gly	Asp	Ile		
			165					170						175			
cgg	gcg	aag	aag	att	gcc	agc	atc	gca	gat	gtg	tgt	gag	tcc	atg	aag		633
Arg	Ala	Lys	Lys	Ile	Ala	Ser	Ile	Ala	Asp	Val	Cys	Glu	Ser	Met	Lys		
			180					185					190				
gag	cag	ctg	ctg	gtt	ctc	gtt	gag	tgg	gcc	aag	tac	atc	cca	gct	ttc		681
Glu	Gln	Leu	Leu	Val	Leu	Val	Glu	Trp	Ala	Lys	Tyr	Ile	Pro	Ala	Phe		
		195					200					205					
tgc	gag	ctc	ccc	ctg	gac	gac	cag	gtg	gcc	ctg	ctc	aga	gcc	cat	gct		729
Cys	Glu	Leu	Pro	Leu	Asp	Asp	Gln	Val	Ala	Leu	Leu	Arg	Ala	His	Ala		
		210				215					220						
ggc	gag	cac	ctg	ctg	ctc	gga	gcc	acc	aag	aga	tcc	atg	gtg	ttc	aag		777
Gly	Glu	His	Leu	Leu	Leu	Gly	Ala	Thr	Lys	Arg	Ser	Met	Val	Phe	Lys		
		225				230				235				240			
gac	gtg	ctg	ctc	cta	ggc	aat	gac	tac	att	gtc	cct	cgg	cac	tgc	cgg		825
Asp	Val	Leu	Leu	Leu	Gly	Asn	Asp	Tyr	Ile	Val	Pro	Arg	His	Cys	Pro		
				245				250						255			
gag	ctg	gcg	gag	atg	agc	cgg	gtg	tcc	ata	cgc	atc	ctt	gac	gag	ctg		873
Glu	Leu	Ala	Glu	Met	Ser	Arg	Val	Ser	Ile	Arg	Ile	Leu	Asp	Glu	Leu		
		260					265						270				
gtg	ctg	ccc	ttc	cag	gag	ctg	cac	atc	gat	gac	aat	gag	tat	gcc	tac		921

Val	Leu	Pro	Phe	Gln	Glu	Leu	His	Ile	Asp	Asp	Asn	Glu	Tyr	Ala	Tyr		
	275						280					285					
ctc	aaa	gcc	atc	atc	ttc	ttt	gac	cca	gat	gcc	aag	ggg	ctg	agc	gat	969	
Leu	Lys	Ala	Ile	Ile	Phe	Phe	Asp	Pro	Asp	Ala	Lys	Gly	Leu	Ser	Asp		
	290					295					300						
cca	ggg	aag	atc	aag	cgg	ctg	cgt	tcc	cag	gtg	cag	gtg	agc	ttg	gag	1017	
Pro	Gly	Lys	Ile	Lys	Arg	Leu	Arg	Ser	Gln	Val	Gln	Val	Ser	Leu	Glu		
	305				310				315					320			
gac	tac	atc	aac	gac	cgc	cag	tat	gac	tgc	cgt	ggc	cgc	ttt	gga	gag	1065	
Asp	Tyr	Ile	Asn	Asp	Arg	Gln	Tyr	Asp	Ser	Arg	Gly	Arg	Phe	Gly	Glu		
			325					330					335				
ctg	ctg	ctg	ctg	ctg	ccc	acc	ttg	cag	agc	atc	acc	tgg	cag	atg	atc	1113	
Leu	Leu	Leu	Leu	Leu	Pro	Thr	Leu	Gln	Ser	Ile	Thr	Trp	Gln	Met	Ile		
			340					345					350				
gag	cag	atc	cag	ttc	atc	aag	ctc	ttc	ggc	atg	gcc	aag	att	gac	aac	1161	
Glu	Gln	Ile	Gln	Phe	Ile	Lys	Leu	Phe	Gly	Met	Ala	Lys	Ile	Asp	Asn		
	355					360					365						
ctg	ttg	cag	gag	atg	ctg	ctg	gga	ggg	tcc	ccc	agc	gat	gca	ccc	cat	1209	
Leu	Leu	Gln	Glu	Met	Leu	Leu	Gly	Gly	Ser	Pro	Ser	Asp	Ala	Pro	His		
	370					375					380						
gcc	cac	cac	ccc	ctg	cac	cct	cac	ctg	atg	cag	gaa	cat	atg	gga	acc	1257	
Ala	His	His	Pro	Leu	His	Pro	His	Leu	Met	Gln	Glu	His	Met	Gly	Thr		
	385				390					395				400			
aac	gtc	atc	gtt	gcc	aac	aca	atg	ccc	act	cac	ctc	agc	aac	gga	cag	1305	
Asn	Val	Ile	Val	Ala	Asn	Thr	Met	Pro	Thr	His	Leu	Ser	Asn	Gly	Gln		
			405					410					415				
atg	tgt	gag	tgg	ccc	cga	ccc	agg	gga	cag	gca	gcc	acc	cct	gag	acc	1353	
Met	Cys	Glu	Trp	Pro	Arg	Pro	Arg	Gly	Gln	Ala	Ala	Thr	Pro	Glu	Thr		
			420					425					430				
cca	cag	ccc	tca	ccg	cca	ggt	ggc	tca	ggg	tct	gag	ccc	tat	aag	ctc	1401	
Pro	Gln	Pro	Ser	Pro	Pro	Gly	Gly	Ser	Gly	Ser	Glu	Pro	Tyr	Lys	Leu		
	435					440					445						
ctg	ccg	gga	gcc	gtc	gcc	aca	atc	gtc	aag	ccc	ctc	tct	gcc	atc	ccc	1449	
Leu	Pro	Gly	Ala	Val	Ala	Thr	Ile	Val	Lys	Pro	Leu	Ser	Ala	Ile	Pro		
	450					455					460						
cag	ccg	acc	atc	acc	aag	cag	gaa	gtt	atc	tag	caagccgc	tggggcttgg	1500				
Gln	Pro	Thr	Ile	Thr	Lys	Gln	Glu	Val	Ile	*							
	465				470				475								
gggctccact	ggctcccccc	agccccctaa	gagagcacct	ggtgatcacg	tgggtcacggc	1560											
aaaggaagac	gtgatgccag	gaccagtccc	agagcaggaa	tgggaaggat	gaagggcccg	1620											
agaacatggc	ctaagggcca	catcccactg	ccacccttga	cgcctgctc	tggataacaa	1680											
gactttgact	tggggagacc	tctactgcct	tggacaactt	atctcatggt	gaagccactg	1740											
ccttcacctt	caccttcac	catgtccaac	ccccgacttc	atcccaatgg	acagccgcct	1800											
ggagatgact	tgaggcetta	cttaaaccaca	gctcccttet	tccttagcct	ggtgcttctc	1860											
ctctcctagc	ccctgtcatg	gtgtccagac	agagccctgt	gaggtgggt	ccaattgtgg	1920											

```

cacttggggc accttgctcc tccttctgct gctgccccca cctctgctgc ctccctctgc 1980
tgtcaccttg ctccagccatc ccgtcttctc caacaccacc tctccagagg ccaaggaggc 2040
cttggaacg attccccag tcattctggg aacatgttgt aagcactgac tgggaccagg 2100
caccaggcag ggtctagaag gctgtggtga gggaagacgc ctttctctc caaccaacc 2160
tcatectctt tcttcaggga cttgggtggg tacttgggtg aggatccctg aaggccttca 2220
acccgagaaa acaaaccag gttggcgact gcaacaggaa cttggagtgg agaggaaaag 2280
catcagaaag aggcagacca tccaccaggc ctttgagaaa gggtagaatt ctggctggta 2340
gagcagggtga gatgggacat tccaaagaac agcctgagcc aaggcctcgt ggtagtaaga 2400
atctagcaag aattgaggaa gaatggtgtg ggagagggat gatgaagaga gagagggcct 2460
gctggagagc atagggtctg gaacaccagg ctgaggtcct gatcagcttc aaggagtatg 2520
cagggagctg ggcttcaga aaatgaacac agcagttctg cagaggacgg gaggctggaa 2580
gctgggaggt cagggtgggt ggatgatata atgcggtga gagtaatgag gcttggggct 2640
ggagaggaca agatgggtaa accctcacat cagagtgaca tccaggagga ataagtcca 2700
gggcctgtct ctaggtcgtc tgtaacgccg gccatgtcca gcgtcagtat g 2751

```

```

<210> 977
<211> 6109
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> CDS
<222> (227) .. (2836)

```

```

<400> 977
cggaagctg gggtcacttc ctgctccgtc ccagtcaccc tgaactggtc cccgggtcct 60
cagcctggaa tcaccccttg agaaggaccc cagagtcctc ggcgccagc ccgtcccccg 120
aggcagggca ctgaaggggt taagtccctt ggggctggat tccgccttcc ggcttttccc 180
agacccaga gccggtccct ggaacactgc agtcctgagc tctggg atg gag ccc 235
Met Glu Pro
1

gag act gcg ctg tgg ggc ccg gat ctg cag ggt ccg gaa cag agc ccc 283
Glu Thr Ala Leu Trp Gly Pro Asp Leu Gln Gly Pro Glu Gln Ser Pro
5 10 15

aac gat gct cac aga ggt gcc gag agt gaa aac gaa gag gag agc cct 331
Asn Asp Ala His Arg Gly Ala Glu Ser Glu Asn Glu Glu Glu Ser Pro
20 25 30 35

cgg cag gaa agt tct ggg gag gag atc atc atg gga gac ccg gct cag 379
Arg Gln Glu Ser Ser Gly Glu Glu Ile Ile Met Gly Asp Pro Ala Gln
40 45 50

```

agt cca gaa tcc aag gac tca aca gag atg tcc ctg gag aga tcc tcc	427
Ser Pro Glu Ser Lys Asp Ser Thr Glu Met Ser Leu Glu Arg Ser Ser	
55 60 65	
cag gac ccc tct gtc ccc cag aac ccc cca acc cca ctg ggt cac tcc	475
Gln Asp Pro Ser Val Pro Gln Asn Pro Pro Thr Pro Leu Gly His Ser	
70 75 80	
aat ccc ttg gac cac cag atc ccc ctg gac ccc cca gcc ccg gag gta	523
Asn Pro Leu Asp His Gln Ile Pro Leu Asp Pro Pro Ala Pro Glu Val	
85 90 95	
gtc cct acc cca tct gac tgg acc aag gcc tgc gag gcc agc tgg cag	571
Val Pro Thr Pro Ser Asp Trp Thr Lys Ala Cys Glu Ala Ser Trp Gln	
100 105 110 115	
tgg ggc gct ctc acc aca tgg aac agc ccc cca gtc gtc ccc gcc aac	619
Trp Gly Ala Leu Thr Thr Trp Asn Ser Pro Pro Val Val Pro Ala Asn	
120 125 130	
gag ccc agc ctg cgg gag ctg gtg cag ggc cgc ccg gcg ggg gcg gag	667
Glu Pro Ser Leu Arg Glu Leu Val Gln Gly Arg Pro Ala Gly Ala Glu	
135 140 145	
aag ccc tac atc tgc aac gag tgc ggc aag agc ttc agc cag tgg tcc	715
Lys Pro Tyr Ile Cys Asn Glu Cys Gly Lys Ser Phe Ser Gln Trp Ser	
150 155 160	
aag ctg ctg cgg cac cag cgc atc cac acg gga gag cgg ccc aac acc	763
Lys Leu Leu Arg His Gln Arg Ile His Thr Gly Glu Arg Pro Asn Thr	
165 170 175	
tgc tcc gag tgc ggc aag agc ttc acg cag agc tcg cac ctg gtg cag	811
Cys Ser Glu Cys Gly Lys Ser Phe Thr Gln Ser Ser His Leu Val Gln	
180 185 190 195	
cac cag cgc acg cac acc ggc gag aag ccc tac aag tgc ccc gac tgc	859
His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Lys Cys Pro Asp Cys	
200 205 210	
ggc aag tgc ttc agc tgg agc tcc aac ctg gtg cag cac cag cgc acg	907
Gly Lys Cys Phe Ser Trp Ser Ser Asn Leu Val Gln His Gln Arg Thr	
215 220 225	
cac acg gga gaa gag ccc tac aag tgc acg gag tgc gag ata gcc ttc	955
His Thr Gly Glu Glu Pro Tyr Lys Cys Thr Glu Cys Glu Ile Ala Phe	
230 235 240	
acc cag agc acc aac ctc atc aag cac cag cga tcc cac acc ggc gag	1003
Thr Gln Ser Thr Asn Leu Ile Lys His Gln Arg Ser His Thr Gly Glu	
245 250 255	
aag ccc tac aag tgc ggc gag tgc cgc cgg gct ttc tac cgc agc tcg	1051
Lys Pro Tyr Lys Cys Gly Glu Cys Arg Arg Ala Phe Tyr Arg Ser Ser	
260 265 270 275	
gac ctc atc cag cac cag gcc acc cac aca ggc gag aaa ccc tac aag	1099
Asp Leu Ile Gln His Gln Ala Thr His Thr Gly Glu Lys Pro Tyr Lys	
280 285 290	
tgc ccc gag tgc ggg aag cgc ttc ggc cag aac cac aac ctc ctc aag	1147
Cys Pro Glu Cys Gly Lys Arg Phe Gly Gln Asn His Asn Leu Leu Lys	
295 300 305	

cac cag aag atc cac gcg ggc gag aag cca tac cgc tgc acc gag tgc His Gln Lys Ile His Ala Gly Glu Lys Pro Tyr Arg Cys Thr Glu Cys 310 315 320	1195
ggg aag agc ttc atc cag agc tcg gag ctg acc cag cac cag cgc acg Gly Lys Ser Phe Ile Gln Ser Ser Glu Leu Thr Gln His Gln Arg Thr 325 330 335	1243
cac aca ggc gag aag ccc tac gag tgc cta gag tgc ggc aag agc ttc His Thr Gly Glu Lys Pro Tyr Glu Cys Leu Glu Cys Gly Lys Ser Phe 340 345 350 355	1291
ggc cac agc tcc acc ctc atc aag cac cag cgg act cac ctg cgc gag Gly His Ser Ser Thr Leu Ile Lys His Gln Arg Thr His Leu Arg Glu 360 365 370	1339
gac ccg ttc aag tgc cca gtg tgc ggc aag acc ttc acc ctg agc gcc Asp Pro Phe Lys Cys Pro Val Cys Gly Lys Thr Phe Thr Leu Ser Ala 375 380 385	1387
acg ttg ctg cgg cac cag cgc acg cac acg ggc gag cgg ccc tac aag Thr Leu Leu Arg His Gln Arg Thr His Thr Gly Glu Arg Pro Tyr Lys 390 395 400	1435
tgc cca gag tgc ggc aag agc ttc agc gtc agc tcc aac ctc atc aac Cys Pro Glu Cys Gly Lys Ser Phe Ser Val Ser Ser Asn Leu Ile Asn 405 410 415	1483
cac cag cgc atc cac cgc ggc gag cgg ccc tac atc tgc gcc gac tgc His Gln Arg Ile His Arg Gly Glu Arg Pro Tyr Ile Cys Ala Asp Cys 420 425 430 435	1531
ggc aag agc ttc atc atg agc tcc acc ctt atc cgc cac cag cgc atc Gly Lys Ser Phe Ile Met Ser Ser Thr Leu Ile Arg His Gln Arg Ile 440 445 450	1579
cac acc ggt gag aag ccc tac aag tgt tcc gac tgc ggc aag agc ttc His Thr Gly Glu Lys Pro Tyr Lys Cys Ser Asp Cys Gly Lys Ser Phe 455 460 465	1627
atc cgc agc tcc cac ctt atc cag cac cgc cgc acg cac acc ggc gag Ile Arg Ser Ser His Leu Ile Gln His Arg Arg Thr His Thr Gly Glu 470 475 480	1675
aag ccc tac aag tgc ccc gag tgc ggc aag agc ttc agc cag agc tcc Lys Pro Tyr Lys Cys Pro Glu Cys Gly Lys Ser Phe Ser Gln Ser Ser 485 490 495	1723
aac ctt att acc cac gtc cgc acg cac atg gac gag aac ctg ttc gtg Asn Leu Ile Thr His Val Arg Thr His Met Asp Glu Asn Leu Phe Val 500 505 510 515	1771
tgc tcc gac tgc ggg aag gcc ttc ctg gaa gcc cac gag ctg gag cag Cys Ser Asp Cys Gly Lys Ala Phe Leu Glu Ala His Glu Leu Glu Gln 520 525 530	1819
cac cgg gtg atc cat gag agg ggg aag acc cca gcg cgt agg gcc cag His Arg Val Ile His Glu Arg Gly Lys Thr Pro Ala Arg Arg Ala Gln 535 540 545	1867
ggc gac agc ctg ctg ggg ctc ggg gac ccc tcc ctg ctg acc ccg ccg Gly Asp Ser Leu Leu Gly Leu Gly Asp Pro Ser Leu Leu Thr Pro Pro 550 555 560	1915

ccg gga gcc aag ccg cac aag tgt ctc gtg tgc gga aag ggc ttc aac	1963
Pro Gly Ala Lys Pro His Lys Cys Leu Val Cys Gly Lys Gly Phe Asn	
565 570 575	
gac gag ggc atc ttc atg caa cat cag agg atc cac atc gga gaa aac	2011
Asp Glu Gly Ile Phe Met Gln His Gln Arg Ile His Ile Gly Glu Asn	
580 585 590 595	
ccc tac aaa aat gca gac ggc ctc atc gca cac gca gcc ccc aaa cct	2059
Pro Tyr Lys Asn Ala Asp Gly Leu Ile Ala His Ala Ala Pro Lys Pro	
600 605 610	
cct cag tta cga tcc cca agg ctc cct ttc aga ggg aat tcc tac ccc	2107
Pro Gln Leu Arg Ser Pro Arg Leu Pro Phe Arg Gly Asn Ser Tyr Pro	
615 620 625	
ggg gct gcg gag ggc aga gcg gag gcc ccc gga cag ccc ctt aag ccg	2155
Gly Ala Ala Glu Gly Arg Ala Glu Ala Pro Gly Gln Pro Leu Lys Pro	
630 635 640	
ccg gag ggt cag gag ggc ttc agc cag agg cgg ggg ctg ctg tcc tcc	2203
Pro Glu Gly Gln Glu Gly Phe Ser Gln Arg Arg Gly Leu Leu Ser Ser	
645 650 655	
aag acc tac atc tgc tcc cac tgc gga gag agc ttc ctg gat cgc tct	2251
Lys Thr Tyr Ile Cys Ser His Cys Gly Glu Ser Phe Leu Asp Arg Ser	
660 665 670 675	
gtg ctc ctc cag cat cag ctc acc cac ggc aac gaa aag ccc ttt ctc	2299
Val Leu Leu Gln His Gln Leu Thr His Gly Asn Glu Lys Pro Phe Leu	
680 685 690	
ttt cct gat tat aga att ggc cta ggg gaa ggc gca ggg ccc agc ccc	2347
Phe Pro Asp Tyr Arg Ile Gly Leu Gly Glu Gly Ala Gly Pro Ser Pro	
695 700 705	
ttc tta agt ggg aag ccc ttt aaa tgc cct gaa tgc aaa caa agc ttt	2395
Phe Leu Ser Gly Lys Pro Phe Lys Cys Pro Glu Cys Lys Gln Ser Phe	
710 715 720	
ggc ctc agc tct gag ctg ctg ctg cac cag aaa gtc cat gca ggc ggg	2443
Gly Leu Ser Ser Glu Leu Leu His Gln Lys Val His Ala Gly Gly	
725 730 735	
aag agc tcc cag aag agt cca gag ctg ggg aag agc tct tcc gtc ctc	2491
Lys Ser Ser Gln Lys Ser Pro Glu Leu Gly Lys Ser Ser Ser Val Leu	
740 745 750 755	
ctg gag cat ctc agg agc ccc ctg ggg gcc aga ccc tac cgc tgc tca	2539
Leu Glu His Leu Arg Ser Pro Leu Gly Ala Arg Pro Tyr Arg Cys Ser	
760 765 770	
gat tgc agg gcc tcc ttc ctc gac cgc gtg gcc ctc acc cgg cac caa	2587
Asp Cys Arg Ala Ser Phe Leu Asp Arg Val Ala Leu Thr Arg His Gln	
775 780 785	
gaa acc cac acc cag gaa aaa ccc ccc aat ccc gag gac ccc cct cca	2635
Glu Thr His Thr Gln Glu Lys Pro Pro Asn Pro Glu Asp Pro Pro Pro	
790 795 800	
gag gca gtc acc ctg tcc aca gat cag gaa ggt gag ggc gag acc cct	2683
Glu Ala Val Thr Leu Ser Thr Asp Gln Glu Gly Glu Gly Glu Thr Pro	
805 810 815	

acc ccc aca gag agc agc agc cat ggg gaa ggg	caa aac ccc aaa acc	2731
Thr Pro Thr Glu Ser Ser Ser His Gly Glu Gly	Gln Asn Pro Lys Thr	
820	825 830 835	
cta gtg gaa gaa aag ccc tat ctg tgc ccc gag tgt gga gcc ggc ttc		2779
Leu Val Glu Glu Lys Pro Tyr Leu Cys Pro Glu Cys Gly Ala Gly Phe		
840	845 850	
aca gaa gtc gca gcc ctc ctg ctc cat agg agc tgc cac cca ggt gtc		2827
Thr Glu Val Ala Ala Leu Leu Leu His Arg Ser Cys His Pro Gly Val		
855	860 865	
tcc ctg tga aatgggt ctggagacca ggggcctcgc tctctccaga gaggaacact		2883
Ser Leu *		
870		
ggatttttttc ccccaaaaaa attacatggg gaagggagga taaccctatc agatggtagt		2943
ggagtggagg agaaagaacc ctgggaaaaa atagtgccttt tacatcagtg atgagaaacc		3003
ctataaaatt gttggtggga agcacttata aggcagtaga gaaaaactgt tgggttagaa		3063
accctataaa tatgtaggaa aaaaaaagc cctttaagtc tgtagcagaa aaaccctata		3123
aaccatagtg gataaaagcc ctattaattg taggaagagg tcccaatatg tctctgaaca		3183
accctataaa attgtatcaa aatccttagg aaaatcctat agggtcgggg aagtaccgca		3243
atggcactga cccgggagta acgaccctca gatgatgcag aaaacacctc tccctcactg		3303
ttccacaatg ttctctccca gcagccctgg acagttctca tggaggaaga tgctcagctg		3363
ggggagtggg gtgggaactg ggtggaactg aaaaggaaga aaataggaga aaaataagtg		3423
accaggggct ctggagcccc cagaggagat aagacagaga ctaggaagaa aagggtccac		3483
tcactgcact ggggtccttg gggtttgagg acaatgtag atgcattgtg tgttttaggg		3543
aaagaggcct atggaatccc ttatcaaac cccaaaatgg ggaagaaaaa acaaattggc		3603
aagccttttt aaaggctgaa gtttggggtg cagaaacatg gtcagtataa gaatactgag		3663
aaaccaccac aaaaattagg ggggaagcagg gggcagtttc tgtagattg ctttgagggg		3723
agcaaaccaa ggtggggaaa ctgctcacat ggaaccacag taactccagg ccccttcttg		3783
cttccggaag cttgcgaaac tgcaagtagc aggcaggcc cagctctcag agtgcaaggg		3843
ttctccccac accaggcagg accacccttt ctcctgccc agccagggac ttctactctg		3903
caaggcctcc agggatggcg gttgcctccc accacattct caggctctac cttcaggagg		3963
tttttctga aatctaactg ccgccagtgg cagctcattt cctcaaattc tgcctcagt		4023
ggagagggag aaccgctgct agtcgacctc caaagaataa agcccttcag agacttaggg		4083
cctgcgtgtg ggcctcccca gccttctcca agtcacagg gccacagaat ttcttagaaa		4143
gctttgatta gccagcaact tgattttaaa cttcagctat tcacttttgt tggtagcaag		4203
gctgccccgc aggataaggc agccctcctc cctggtgggg atccagacac cccacagact		4263
gagccacagg tcctgaaga gtccgcagag gccgtatcac cctcttcacc ctggtacctg		4323

gagccctcca gggttgtgag atccagccca atctcagcct tgagatggat gggatggatt 4383
ccactcactt ggctccctc tcctccttgg ccagaaacct tcagaaggaa acagaaggat 4443
gagaaagcct cccttgccag gcccatctca cctccacac cacacagtta cacattcata 4503
aacagccaag cctgctcaca ggctgggca tatgtggctg gggagagact gttgcctat 4563
gagatgggtg aagacagaaa actcttgaat gaaacatctg taacaagact cccactccct 4623
aatcctggag accccttcaa aaggagagga ctctgctcag cgctgggtca gaaaggaagt 4683
gcttgccaac ccagtaatg cgctgtcctg gagtaagagg actgagatgc cagctgtggg 4743
gcccgtcagg agtcacgtct caagagaggg gtgaccaga tttttgcaa gctgtggaag 4803
agacctctaa ttccatgacc taaagtttca cacaaccttt atgcaaacc ttgccattt 4863
gtctatcctg gcccagcag gatgacctc acatttaaaa ggatcaaaat ctcaaacatt 4923
gtgggaggaa aacgccaggc ctgctgggga gagggagaag gcaggcctca ggattgtgcg 4983
gagaaccatg ttgccatctg cataacgcc cagcctatcc aagtgccagg aagggaagca 5043
ctactgaggg ggggtgctgcc tgtgggtctc ttcctaacag aacgccaacg aaggggggtgc 5103
cctgtaagaa tgagaagtct gccaaagtcta aggagatgtc cccctcccca agatggtagc 5163
agaaactgaa gttgtaaaga caaacctctc gcaaagccag aagcagatgc tctcaaaac 5223
aggcctaagg aatctgttcc cagaagaggc ctggggagca gcttttgggg ctgagaggcc 5283
agtctggggg gaggcaggca gtgtgactga aggccggcgc aggcctgttt cggactaggg 5343
tgtagcatat ttagtaggat gctcacatgt tgtagggatg ggtgagggct aaggggcttg 5403
gctctgtac gggatggatg atgtgagcgc acagttcgta gggtcaggcg tcttgcggt 5463
ggaaaggggc agggttcgat acctctgggg tgtggcgtgt tctctcttgc ccacctcccc 5523
aagctccttt aaccaggagc ttccctccca gagtgaagcta cgtcttggga ggattgaagc 5583
agggagggtg cagtggctag agttgctcag atcggctcag atgaaggccc aggggtcaaa 5643
gcatttgctc accacaactg agtctggaag gactgtgca gccaaacct cttgtccaat 5703
cacatgcagg cccagggcc ctcagaaacg cctgggtgga gggaggagcc caacagatag 5763
ggtcagggag tcagtgggga aagcagaggg gagagcttag agtgaaactt gaaactgcta 5823
tggaatgga ggtcagatgg gaacttgga ctgggcatga atcctgaatg gtggggaaac 5883
ttgaagccat cacagccaag aggtgggggt ccatgacctg cctgaggtc agcagctccc 5943
agactccttt gccctcacta gggaagcccc agtcaccgga cttgtcccca tggagtgaag 6003
agaggcccca tttttgagtg ttgtgtgtcc aaaacagtgt tgtgtcactg gtgggtcatgt 6063
tgcttagttg aagagaataa agggaataag atttaaaaa aaaaaa 6109

<211> 3657
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (645) .. (3254)

<400> 978
 acgggctaggt acgaggcctg gtgtagcag agttgagtc actccgcacc ccaccctctg 60
 tctggtacag cttaccaaac caaagtgcc aaagccgtga catcccggcc ggccggctcgc 120
 agggccccgc cctccgcacg tcacggccgc cgggtgcagt gccccctagg ggccccctggg 180
 acgaggagga agcgccaggt ccttcccgcc gccgccgcgc ccgccgcgc gcctgtctcc 240
 cctggcacgc gccccgcgc cctcggcagc cgcagctccg tgtccctga gaaccagccg 300
 tccccgcga tgggcacgcg tctgccgtc gtctgcgc agctccgcgc ccgcgccag 360
 cccccgggccc ctccgcgcgc cctccgtgtg ccctgtcgcg ctagcagcag gcgcgcggcg 420
 gcaggcggtt ggcgtgtggc cgggagggcc tgcttgaca ggcgcggccg caggatggcc 480
 agggccggag cagctgcagc ccggcgccgc gaacgcccgc ggcgcgggac tccatcgta 540
 gagaagtcac tcagaattca aaagaagttc taagtttatt gcaagaaaaa aaccctgcct 600
 tcaagccggt tcttgcaatt atccaggcag gtgacgacaa cttg atg cag gaa atc 656
 Met Gln Glu Ile
 1
 aac cag aat ttg gct gag gag gct ggt ctg aac atc act cac att tgc 704
 Asn Gln Asn Leu Ala Glu Glu Ala Gly Leu Asn Ile Thr His Ile Cys
 5 10 15 20
 ctc cct cca gat agc agt gaa gcc gag att ata gat gaa atc tta aag 752
 Leu Pro Pro Asp Ser Ser Glu Ala Glu Ile Ile Asp Glu Ile Leu Lys
 25 30 35
 atc aat gaa gat acc aga gta cat ggc ctt gcc ctt cag atc tct gag 800
 Ile Asn Glu Asp Thr Arg Val His Gly Leu Ala Leu Gln Ile Ser Glu
 40 45 50
 aac ttg ttt agc aac aaa gtc ctc aat gcc ttg aaa cca gaa aaa gat 848
 Asn Leu Phe Ser Asn Lys Val Leu Asn Ala Leu Lys Pro Glu Lys Asp
 55 60 65
 gtg gat gga gta aca gac ata aac ctg ggg aag ctg gtg cga ggg gat 896
 Val Asp Gly Val Thr Asp Ile Asn Leu Gly Lys Leu Val Arg Gly Asp
 70 75 80
 gcc cat gaa tgt ttt gtt tca cct gtt gcc aaa gct gta att gaa ctt 944
 Ala His Glu Cys Phe Val Ser Pro Val Ala Lys Ala Val Ile Glu Leu
 85 90 95 100
 ctt gaa aaa tca gta ggt gtc aac cta gat gga aag aag att ttg gta 992
 Leu Glu Lys Ser Val Gly Val Asn Leu Asp Gly Lys Lys Ile Leu Val
 105 110 115
 gtg ggg gcc cat ggg tct ttg gaa gct gct cta caa tgc ctg ttc cag 1040
 Val Gly Ala His Gly Ser Leu Glu Ala Ala Leu Gln Cys Leu Phe Gln
 120 125 130

aga aaa ggg tcc atg aca atg agc atc cag tgg aaa aca cgc cag ctt	1088
Arg Lys Gly Ser Met Thr Met Ser Ile Gln Trp Lys Thr Arg Gln Leu	
135 140 145	
caa agc aag ctt cac gag gct gac att gtg gtc cta ggc tca cct aag	1136
Gln Ser Lys Leu His Glu Ala Asp Ile Val Val Leu Gly Ser Pro Lys	
150 155 160	
cca gaa gag att ccc ctt act tgg ata caa cca gga act act gtt ctc	1184
Pro Glu Glu Ile Pro Leu Thr Trp Ile Gln Pro Gly Thr Thr Val Leu	
165 170 175 180	
aac tgc tcc cat gac ttc ctg tca ggg aag gtt ggg tgt ggc tct cca	1232
Asn Cys Ser His Asp Phe Leu Ser Gly Lys Val Gly Cys Gly Ser Pro	
185 190 195	
aga ata cat ttt ggt gga ctc att gag gaa gat gat gtg att ctc ctt	1280
Arg Ile His Phe Gly Gly Leu Ile Glu Glu Asp Asp Val Ile Leu Leu	
200 205 210	
gct gca gct ctg cga att cag aac atg gtc agt agt gga agg aga tgg	1328
Ala Ala Ala Leu Arg Ile Gln Asn Met Val Ser Ser Gly Arg Arg Trp	
215 220 225	
ctt cgt gaa cag cag cac agg cgg tgg aga ctt cac tgc ttg aaa ctt	1376
Leu Arg Glu Gln Gln His Arg Arg Trp Arg Leu His Cys Leu Lys Leu	
230 235 240	
cag cct ctc tcc cct gtg cca agt gac att gag att tca aga gga caa	1424
Gln Pro Leu Ser Pro Val Pro Ser Asp Ile Glu Ile Ser Arg Gly Gln	
245 250 255 260	
act cca aaa gct gtg gat gtc ctt gcc aag gag att gga ttg ctt gca	1472
Thr Pro Lys Ala Val Asp Val Leu Ala Lys Glu Ile Gly Leu Leu Ala	
265 270 275	
gat gaa att gaa atc tat ggc aaa agc aaa gcc aaa gta cgt ttg tcc	1520
Asp Glu Ile Glu Ile Tyr Gly Lys Ser Lys Ala Lys Val Arg Leu Ser	
280 285 290	
gtg cta gaa agg tta aag gat caa gca gat gga aaa tac gtc tta gtt	1568
Val Leu Glu Arg Leu Lys Asp Gln Ala Asp Gly Lys Tyr Val Leu Val	
295 300 305	
gct ggg atc aca ccc acc cct ctt gga gaa ggg aag agc aca gtc acc	1616
Ala Gly Ile Thr Pro Thr Pro Leu Gly Glu Gly Lys Ser Thr Val Thr	
310 315 320	
atc ggg ctt gtg cag gct ctg acc gca cac ctg aat gtc aac tcc ttt	1664
Ile Gly Leu Val Gln Ala Leu Thr Ala His Leu Asn Val Asn Ser Phe	
325 330 335 340	
gcc tgc ttg agg cag cct tcc caa gga ccg acg ttt gga gtg aaa gga	1712
Ala Cys Leu Arg Gln Pro Ser Gln Gly Pro Thr Phe Gly Val Lys Gly	
345 350 355	
gga gcc gcg ggt ggt gga tat gcc cag gtc atc ccc atg gag gag ttc	1760
Gly Ala Ala Gly Gly Gly Tyr Ala Gln Val Ile Pro Met Glu Glu Phe	
360 365 370	
aac ctt cac ttg act gga gac atc cac gcc atc acc gct gcc aat aac	1808
Asn Leu His Leu Thr Gly Asp Ile His Ala Ile Thr Ala Ala Asn Asn	
375 380 385	

ttg ctg gct gcc gcc atc gac acg agg att ctt cat gaa aac acg caa Leu Leu Ala Ala Ala Ile Asp Thr Arg Ile Leu His Glu Asn Thr Gln 390 395 400	1856
aca gat aag gct ctg tat aat cgg ctg gtt cct tta gtg aat ggt gtc Thr Asp Lys Ala Leu Tyr Asn Arg Leu Val Pro Leu Val Asn Gly Val 405 410 415 420	1904
aga gaa ttt tca gaa att cag ctt gct cgg cta aaa aaa ctg gga ata Arg Glu Phe Ser Glu Ile Gln Leu Ala Arg Leu Lys Lys Leu Gly Ile 425 430 435	1952
aat aag act gat ccg agc aca ctg aca gaa gag gaa gtg agt aaa ttt Asn Lys Thr Asp Pro Ser Thr Leu Thr Glu Glu Glu Val Ser Lys Phe 440 445 450	2000
gcc cgt ctc gac atc gac cca tct acc atc acg tgg cag aga gta ttg Ala Arg Leu Asp Ile Asp Pro Ser Thr Ile Thr Trp Gln Arg Val Leu 455 460 465	2048
gat aca aat gac cga ttt cta cga aaa ata acc atc ggg cag gga aac Asp Thr Asn Asp Arg Phe Leu Arg Lys Ile Thr Ile Gly Gln Gly Asn 470 475 480	2096
aca gag aag ggc cat tac cgg cag gcg cag ttt gac atc gca gtg gcc Thr Glu Lys Gly His Tyr Arg Gln Ala Gln Phe Asp Ile Ala Val Ala 485 490 495 500	2144
agc gag atc atg gcg gtg ctg gcc ctg acg gac agc ctc gca gac atg Ser Glu Ile Met Ala Val Leu Ala Leu Thr Asp Ser Leu Ala Asp Met 505 510 515	2192
aag gca cgg ctg gga agg atg gtg gtg gcc agt gac aaa agc ggg cag Lys Ala Arg Leu Gly Arg Met Val Val Ala Ser Asp Lys Ser Gly Gln 520 525 530	2240
cct gtg aca gca gat gat ttg ggg gtg aca ggt gct ttg aca gtt ttg Pro Val Thr Ala Asp Asp Leu Gly Val Thr Gly Ala Leu Thr Val Leu 535 540 545	2288
atg aaa gat gca ata aaa cca aac ctg atg cag acc ctg gaa ggg aca Met Lys Asp Ala Ile Lys Pro Asn Leu Met Gln Thr Leu Glu Gly Thr 550 555 560	2336
cct gtg ttc gtg cat gcg ggc cct ttt gct aac att gct cac ggc aac Pro Val Phe Val His Ala Gly Pro Phe Ala Asn Ile Ala His Gly Asn 565 570 575 580	2384
tct tca gtg ttg gct gat aaa att gcc ctg aaa ctg gtt ggt gaa gaa Ser Ser Val Leu Ala Asp Lys Ile Ala Leu Lys Leu Val Gly Glu Glu 585 590 595	2432
gga ttt gta gtg acc gaa gct ggc ttt ggt gct gac atc gga atg gag Gly Phe Val Val Thr Glu Ala Gly Phe Gly Ala Asp Ile Gly Met Glu 600 605 610	2480
aaa ttc ttc aac atc aag tgc cga gct tcc ggc ttg gtg ccc aac gtg Lys Phe Phe Asn Ile Lys Cys Arg Ala Ser Gly Leu Val Pro Asn Val 615 620 625	2528
gtt gtg tta gtg gca acg gtg cga gct ctg aag atg cat gga ggc ggg Val Val Leu Val Ala Thr Val Arg Ala Leu Lys Met His Gly Gly Gly 630 635 640	2576

cca agt gta acg gct ggt gtt cct ctt aag aaa gaa tat aca gag gag Pro Ser Val Thr Ala Gly Val Pro Leu Lys Lys Glu Tyr Thr Glu Glu 645 650 655 660	2624
aac atc cag ctg gtg gca gac ggc tgc tgt aac ctc cag aag caa att Asn Ile Gln Leu Val Ala Asp Gly Cys Asn Leu Gln Lys Gln Ile 665 670 675	2672
cag atc act cag ctc ttt ggg gtt ccc gtt gtg gtg gct ctg aat gtc Gln Ile Thr Gln Leu Phe Gly Val Pro Val Val Val Ala Leu Asn Val 680 685 690	2720
ttc aag acc gac acc cgc gct gag att gac ttg gtg tgt gag ctt gca Phe Lys Thr Asp Thr Arg Ala Glu Ile Asp Leu Val Cys Glu Leu Ala 695 700 705	2768
aag cgg gct ggt gcc ttt gat gca gtc ccc tgc tat cac tgg tcg gtt Lys Arg Ala Gly Ala Phe Asp Ala Val Pro Cys Tyr His Trp Ser Val 710 715 720	2816
ggt gga aaa gga tcg gtg gac ttg gct cgg gct gtg aga gag gct gcg Gly Gly Lys Gly Ser Val Asp Leu Ala Arg Ala Val Arg Glu Ala Ala 725 730 735 740	2864
agt aaa aga agc cga ttc cag ttc ctg tat gat gtt cag gtt cca att Ser Lys Arg Ser Arg Phe Gln Phe Leu Tyr Asp Val Gln Val Pro Ile 745 750 755	2912
gtg gac aag ata agg acc att gct cag gct gtc tat gga gcc aaa gat Val Asp Lys Ile Arg Thr Ile Ala Gln Ala Val Tyr Gly Ala Lys Asp 760 765 770	2960
att gaa ctc tct cct gag gca caa gcc aaa ata gat cgt tac act caa Ile Glu Leu Ser Pro Glu Ala Gln Ala Lys Ile Asp Arg Tyr Thr Gln 775 780 785	3008
cag ggt ttt gga aat ttg ccc atc tgc atg gca aag acc cac ctt tct Gln Gly Phe Gly Asn Leu Pro Ile Cys Met Ala Lys Thr His Leu Ser 790 795 800	3056
cta tct cac caa cct gac aaa aaa ggt gtg cca agg gac ttc atc tta Leu Ser His Gln Pro Asp Lys Lys Gly Val Pro Arg Asp Phe Ile Leu 805 810 815 820	3104
cct atc agt gac gtc cgg gcc agc ata ggc gct ggg ttc att tac cct Pro Ile Ser Asp Val Arg Ala Ser Ile Gly Ala Gly Phe Ile Tyr Pro 825 830 835	3152
ttg gtc gga acg atg agc acc atg cca gga ctg ccc acc cgg ccc tgc Leu Val Gly Thr Met Ser Thr Met Pro Gly Leu Pro Thr Arg Pro Cys 840 845 850	3200
ttt tat gac ata gat ctt gat acc gaa aca gaa caa gtt aaa ggc ttg Phe Tyr Asp Ile Asp Leu Asp Thr Glu Thr Glu Gln Val Lys Gly Leu 855 860 865	3248
ttc taa gtggacaagg ctctcacagg acccgatgca gactcctgaa acagactact Phe * 870	3304
ctttgccttt ttgctgcagt tggagaagaa actgaatttg aaaaatgtct gttatgcaat	3364
gctggagaca tgggtgaaata ggccaaagat ttcttcttcg ttcaagatga attctgttca	3424

cagtggagta tgggtgttcgg caaaaggacc tccaccaaga ctgaaagaaa ctaattttatt 3484
 tctgttttctg tggagtttcc attattttcta ctgcttacac tttagaatgt ttattttatg 3544
 gggactaagg gattaggagt gtgaactaaa aggtaacatt ttccactctc aagttttcta 3604
 ctttgtcttt gaactgaaaa taaacatgga tctagaaaac caaaaaaaaaaaa aaa 3657

<210> 979
 <211> 806
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (341)..(487)

<400> 979
 accacgaggt cacggttaagg gtggaaccag gattctgccc ggatggggat ctggcatggg 60
 ggggtggggg gttgatttgg gaagcagagc acagcagccc aaatttgctt gtaatgtcgg 120
 cggctacaga ggaaaggcca agaatggaca gattaataaa gggccatcta caagccacga 180
 ataaggccat caccagaagc caaccccgcc agtccttgat ctaggacttc cagacttcaa 240
 aacttttcta gcctgctggc ctgccttcac tgtcctgggg gagacttga gagaccaggt 300
 ggactggagt agactgttga gagacgctgg tctggtgaag atg tcc agg aaa cca 355
 Met Ser Arg Lys Pro
 1 5
 cga gcc tcc agc cca ttg tcc aac aac cac cca cca aca cca aag agg 403
 Arg Ala Ser Ser Pro Leu Ser Asn Asn His Pro Pro Thr Pro Lys Arg
 10 15 20
 cga gga agt gga agg ttc cca aga caa ccc gga agg gaa aag gga ccc 451
 Arg Gly Ser Gly Arg Phe Pro Arg Gln Pro Gly Arg Glu Lys Gly Pro
 25 30 35
 atc aag gaa gtt cca gga aca aaa ggc tct ccc taa aaga ccgccgcttc 501
 Ile Lys Glu Val Pro Gly Thr Lys Gly Ser Pro *
 40 45
 aaaaaaacct gaggaatgga gtgggccaac actatccagc cactctgacc agccgaacga 561
 ggaactcaat caaaatgagc catagcggga ccacaagggc aaggagacca ccaccttctc 621
 cagtctctct tcggacagcc agtaattccc gggcaaggcc agagacttca agtctatctg 681
 aaaagtctcc agaggtctaa cccagataa atagccaaca ggggtgtagag tacattttac 741
 accccaaaga gtgtgccccca tggatgatgaa aataaagtga acatgttgca aactgaaaaa 801
 aaaaa 806

<210> 980

PCT/US01/04098

```
<220>  
<221> CDS  
<222> (341) .. (523)
```

```
<210> 981
<211> 1805
<212> DNA
<213> Homo sapiens
```

```
<220>  
<221> CDS  
<222> (9) .. (1517)
```

2717

1	5	10	
gcc aga gct tgt cta cat cac atg gaa gtg gag ttt gca atc cgt gtt Ala Arg Ala Cys Leu His His Met Glu Val Glu Phe Ala Ile Arg Val 15 20 25 30			98
tat cgg aga att gga aat gtt ggc ata gtg atg tcc ttg gaa caa ata Tyr Arg Arg Ile Gly Asn Val Gly Ile Val Met Ser Leu Glu Gln Ile 35 40 45			146
aag gga ata gag gac tac aat ctt ttg gca gga cac ctt gcc atg ttt Lys Gly Ile Glu Asp Tyr Asn Leu Leu Ala Gly His Leu Ala Met Phe 50 55 60			194
acc aac gat tat aac ctg gct cag gac ttg tac ctt gca tcc agc tgt Thr Asn Asp Tyr Asn Leu Ala Gln Asp Leu Tyr Leu Ala Ser Ser Cys 65 70 75			242
cct att gct gcc ctg gag atg aga agg gat tta cag cat tgg gac agt Pro Ile Ala Ala Leu Glu Met Arg Arg Asp Leu Gln His Trp Asp Ser 80 85 90			290
gct cta caa ctg gca aag cat ttg gcc cca gac cag ata cct ttt ata Ala Leu Gln Leu Ala Lys His Leu Ala Pro Asp Gln Ile Pro Phe Ile 95 100 105 110			338
tca aaa gaa tat gct att cag ctt gaa ttc gcg ggt gat tat gta aat Ser Lys Glu Tyr Ala Ile Gln Leu Glu Phe Ala Gly Asp Tyr Val Asn 115 120 125			386
gct ttg gct cat tat gag aaa gga ata aca ggt gat aat aag gaa cat Ala Leu Ala His Tyr Glu Lys Gly Ile Thr Gly Asp Asn Lys Glu His 130 135 140			434
gat gaa gct tgt ctg gct gga gtg gcc cag atg tcc ata aga atg gga Asp Glu Ala Cys Leu Ala Gly Val Ala Gln Met Ser Ile Arg Met Gly 145 150 155			482
gac ata cgt cga ggg gtt aac caa gcc ctc aag cat ccc agc agg gtc Asp Ile Arg Arg Gly Val Asn Gln Ala Leu Lys His Pro Ser Arg Val 160 165 170			530
ctt aaa aga gac tgt gga gcc ata ttg gag aat atg aag caa ttt tca Leu Lys Arg Asp Cys Gly Ala Ile Leu Glu Asn Met Lys Gln Phe Ser 175 180 185 190			578
gaa gcg gcc caa ctg tat gaa aaa ggt ctc tac tac gat aaa gca gca Glu Ala Ala Gln Leu Tyr Glu Lys Gly Leu Tyr Tyr Asp Lys Ala Ala 195 200 205			626
tct gtt tac atc cgc tct aag aat tgg gca aaa gtt ggt gat ctt ctg Ser Val Tyr Ile Arg Ser Lys Asn Trp Ala Lys Val Gly Asp Leu Leu 210 215 220			674
ccc cac gtt tct tct cct aag atc cat ttg cag tat gcc aaa gcc aag Pro His Val Ser Ser Pro Lys Ile His Leu Gln Tyr Ala Lys Ala Lys 225 230 235			722
gaa gca gat gga aga tac aaa gaa gct gtt gta gct tat gaa aat gca Glu Ala Asp Gly Arg Tyr Lys Glu Ala Val Val Ala Tyr Glu Asn Ala 240 245 250			770
aaa cag tgg caa agt gta atc cgc atc tat ctg gat cac ctc aat aat Lys Gln Trp Gln Ser Val Ile Arg Ile Tyr Leu Asp His Leu Asn Asn			818

255	260	265	270	
cct gaa aaa gct gtc aat att gtt aga gag acc cag tct ctg gat gga				866
Pro Glu Lys Ala Val Asn Ile Val Arg Glu Thr Gln Ser Leu Asp Gly				
	275	280	285	
gcc aaa atg gta gcc agg ttt ttt cta cag ctt ggt gac tat ggg tct				914
Ala Lys Met Val Ala Arg Phe Phe Leu Gln Leu Gly Asp Tyr Gly Ser				
	290	295	300	
gcc atc cag ttt ctt gtc atg tcc aaa tgc aac aat gaa gct ttc aca				962
Ala Ile Gln Phe Leu Val Met Ser Lys Cys Asn Asn Glu Ala Phe Thr				
	305	310	315	
ctg gct cag caa cac aac aaa atg gaa atc tat gca gat att att ggt				1010
Leu Ala Gln Gln His Asn Lys Met Glu Ile Tyr Ala Asp Ile Ile Gly				
	320	325	330	
tct gaa gac act act aat gaa gac tat caa agc att gcc tta tac ttt				1058
Ser Glu Asp Thr Thr Asn Glu Asp Tyr Gln Ser Ile Ala Leu Tyr Phe				
	335	340	345	350
gaa gga gaa aag aga tat ctt cag gct gga aaa ttc ttc ttg ctg tgt				1106
Glu Gly Glu Lys Arg Tyr Leu Gln Ala Gly Lys Phe Phe Leu Leu Cys				
	355	360	365	
ggc caa tat tca cga gca ctt aaa cac ttc ctg aaa tgc cca agc tcg				1154
Gly Gln Tyr Ser Arg Ala Leu Lys His Phe Leu Lys Cys Pro Ser Ser				
	370	375	380	
gaa gat aat gtg gca ata gaa atg gca att gaa act gtt ggt cag gcc				1202
Glu Asp Asn Val Ala Ile Glu Met Ala Ile Glu Thr Val Gly Gln Ala				
	385	390	395	
aaa gat gaa ctg ctg acc aat cag ctg ata gac cat ctc ctg ggg gag				1250
Lys Asp Glu Leu Leu Thr Asn Gln Leu Ile Asp His Leu Leu Gly Glu				
	400	405	410	
aac gat agc atg cct aag gat gcc aag tac ctg ttc cgc ttg tac atg				1298
Asn Asp Ser Met Pro Lys Asp Ala Lys Tyr Leu Phe Arg Leu Tyr Met				
	415	420	425	430
gct ctg aag caa tac cga gaa gct gcc cag act gcc atc atc att gcc				1346
Ala Leu Lys Gln Tyr Arg Glu Ala Ala Gln Thr Ala Ile Ile Ile Ala				
	435	440	445	
aga gaa gag cag tct gca ggc aac tac cgg aat gca cac gat gtt ctc				1394
Arg Glu Glu Gln Ser Ala Gly Asn Tyr Arg Asn Ala His Asp Val Leu				
	450	455	460	
ttc agt atg tat gca gaa ctg aaa tcc cag aag atc aaa att ccc tcc				1442
Phe Ser Met Tyr Ala Glu Leu Lys Ser Gln Lys Ile Lys Ile Pro Ser				
	465	470	475	
gag atg gcc acc aac ctc atg att ctg cac agc tat ata cta gta aga				1490
Glu Met Ala Thr Asn Leu Met Ile Leu His Ser Tyr Ile Leu Val Arg				
	480	485	490	
ttc atg tta aaa atg gag atc aca tga aaggg gctcgcacgc tcattcgggt				1542
Phe Met Leu Lys Met Glu Ile Thr *				
	495	500		
ggccaacaac atcagcaaat ttccatcaca cattgtaccc atcctgacgt caactgtgat				1602

<400> 982																									
tattttgaag	ctgtttaccc	tcgcagctct	ctgactggca	cccctgcctg	cctgcccggc										60										
cctgcacaac	atgcagccct	ccggcctcga	gggtcccggc	acgtttggtc	ggtggcctct										120										
gctgagtctg	ctgctcctgc	tgctgctgct	ccagcctgta	acctgtgcct	acaccacgcc										180										
agggcccccc					cagagccctc	accacgctgg	gcgccccag	agcccacacc	atg ccg						236										
											Met Pro														
											1														
ggc acc tac gct ccc tcg acc aca ctc agt agt ccc agc acc cag ggc															284										
Gly Thr Tyr Ala Pro Ser Thr Thr Leu Ser Ser Pro Ser Thr Gln Gly																									
					5					10					15										
ctg caa gag cag gca cgg gcc ctg atg cgg gac ttc ccg ctc gtg gac															332										
Leu Gln Glu Gln Ala Arg Ala Leu Met Arg Asp Phe Pro Leu Val Asp																									
					20					25					30										
ggc cac aac gac ctg ccc ctg gtc cta agg cag gtt tac cag aaa ggg															380										
Gly His Asn Asp Leu Pro Leu Val Leu Arg Gln Val Tyr Gln Lys Gly																									
					35					40					45					50					
cta cag gat gtt aac ctg cgc aat ttc agc tac ggc cag acc agc ctg															428										
Leu Gln Asp Val Asn Leu Arg Asn Phe Ser Tyr Gly Gln Thr Ser Leu																									
					55					60					65										
gac agg ctt aga gat ggc ctc gtg ggc gcc cag ttc tgg tca gcc tat															476										
Asp Arg Leu Arg Asp Gly Leu Val Gly Ala Gln Phe Trp Ser Ala Tyr																									
					70					75					80										
gtg cca tgc cag acc cag gac cgg gat gcc ctg cgc ctc acc ctg gag															524										
Val Pro Cys Gln Thr Gln Asp Arg Asp Ala Leu Arg Leu Thr Leu Glu																									
					85					90					95										
cag att gac ctc ata cgc cgc atg tgt gcc tcc tat tct gag ctg gag															572										
Gln Ile Asp Leu Ile Arg Arg Met Cys Ala Ser Tyr Ser Glu Leu Glu																									
					100					105					110										
ctt gtg acc tcg gct aaa gct ctg aac gac act cag aaa ttg gcc tgc															620										
Leu Val Thr Ser Ala Lys Ala Leu Asn Asp Thr Gln Lys Leu Ala Cys																									
					115					120					125					130					
ctc atc ggt gta gaq qgt qgc cac tcg ctg gac aat agc ctc tcc atc															668										

Leu Ile Gly Val Glu Gly Gly His Ser Leu Asp Asn Ser Leu Ser Ile	
135 140 145	
tta cgt acc ttc tac atg ctg gga gtg cgc tac ctg acg ctc acc cac	716
Leu Arg Thr Phe Tyr Met Leu Gly Val Arg Tyr Leu Thr Leu Thr His	
150 155 160	
acc tgc aac aca ccc tgg gca gag agc tcc gct aag ggc gtc cac tcc	764
Thr Cys Asn Thr Pro Trp Ala Glu Ser Ser Ala Lys Gly Val His Ser	
165 170 175	
ttc tac aac aac atc agc ggg ctg act gac ttt ggt gag aag gtg gtg	812
Phe Tyr Asn Asn Ile Ser Gly Leu Thr Asp Phe Gly Glu Lys Val Val	
180 185 190	
gca gaa atg aac cgc ctg ggc atg atg gta gac tta tcc cat gtc tca	860
Ala Glu Met Asn Arg Leu Gly Met Met Val Asp Leu Ser His Val Ser	
195 200 205 210	
gat gct gtg gca cgg cgg gcc ctg gaa gtg tca cag gca cct gtg atc	908
Asp Ala Val Ala Arg Arg Ala Leu Glu Val Ser Gln Ala Pro Val Ile	
215 220 225	
ttc tcc cac tcg gct gcc cgg ggt gtg tgc aac agt gct cgg aat gtt	956
Phe Ser His Ser Ala Ala Arg Gly Val Cys Asn Ser Ala Arg Asn Val	
230 235 240	
cct gat gac atc ctg cag ctt ctg aag aag aac ggt ggc gtc gtg atg	1004
Pro Asp Asp Ile Leu Gln Leu Leu Lys Lys Asn Gly Gly Val Val Met	
245 250 255	
gtg tct ttg tcc atg gga gta ata cag tgc aac cca tca gcc aat gtg	1052
Val Ser Leu Ser Met Gly Val Ile Gln Cys Asn Pro Ser Ala Asn Val	
260 265 270	
tcc act gtg gca gat cac ttc gac cac atc aag gct gtc att gga tcc	1100
Ser Thr Val Ala Asp His Phe Asp His Ile Lys Ala Val Ile Gly Ser	
275 280 285 290	
aag ttc atc ggg att ggt gga gat tat gat ggg gcc ggc aag tac agg	1148
Lys Phe Ile Gly Ile Gly Gly Asp Tyr Asp Gly Ala Gly Lys Tyr Arg	
295 300 305	
aag aaa aca aag tgc aaa gcc cct tgg agg aca agt tcc cgg atg agc	1196
Lys Lys Thr Lys Cys Lys Ala Pro Trp Arg Thr Ser Ser Arg Met Ser	
310 315 320	
agc tga gcagttcctg ccactccgac ctctcacgtc tgcgtcagag acagagtcgtg	1252
Ser *	

<210> 983
 <211> 1608
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (49)..(1608)

<400> 983

cgaggccgcc caacaccaac actggagaag aagaaaaaac ctcatttg atg gcg gaa 57
Met Ala Glu
1

gat gaa cct tca ggg gcc ctc ttg aag ccg ctg gtt ttt cgc gtt gac 105
Asp Glu Pro Ser Gly Ala Leu Leu Lys Pro Leu Val Phe Arg Val Asp
5 10 15

gag acc acc ccg gct gtg gtg caa agc gtc ctc ctg gag agg ggg tgg 153
Glu Thr Thr Pro Ala Val Val Gln Ser Val Leu Leu Glu Arg Gly Trp
20 25 30 35

aat aag ttt gat aag cag gag cag aac gcg gag gac tgg aac ctg tac 201
Asn Lys Phe Asp Lys Gln Glu Gln Asn Ala Glu Asp Trp Asn Leu Tyr
40 45 50

tgg agg aca tcc tct ttc cga atg acc gaa cac aac agt gtt aaa ccg 249
Trp Arg Thr Ser Ser Phe Arg Met Thr Glu His Asn Ser Val Lys Pro
55 60 65

tgg cag cag cta aac cac cac cct gga acc acc aag ctt acc agg aaa 297
Trp Gln Gln Leu Asn His His Pro Gly Thr Thr Lys Leu Thr Arg Lys
70 75 80

gac tgt ttg gcc aaa cac ctg aag cac atg agg agg atg tat ggc act 345
Asp Cys Leu Ala Lys His Leu Lys His Met Arg Arg Met Tyr Gly Thr
85 90 95

tcc ctg tac cag ttc atc ccc ctg acg ttc gtc atg ccc aat gac tat 393
Ser Leu Tyr Gln Phe Ile Pro Leu Thr Phe Val Met Pro Asn Asp Tyr
100 105 110 115

acc aag ttc gtg gct gaa tac ttt cag gag agg cag atg ctg ggc acc 441
Thr Lys Phe Val Ala Glu Tyr Phe Gln Glu Arg Gln Met Leu Gly Thr
120 125 130

aag cat agc tat tgg att tgc aag cct gct gag tta tct cgt ggg agg 489
Lys His Ser Tyr Trp Ile Cys Lys Pro Ala Glu Leu Ser Arg Gly Arg
135 140 145

ggg ata cta att ttc agt gac ttt aaa gac ttc atc ttt gat gat atg 537
Gly Ile Leu Ile Phe Ser Asp Phe Lys Asp Phe Ile Phe Asp Asp Met
150 155 160

tac ata gtg cag aaa tat atc tcc aat cct tta ctt att ggc aga tat 585
Tyr Ile Val Gln Lys Tyr Ile Ser Asn Pro Leu Leu Ile Gly Arg Tyr
165 170 175

aaa tgt gat ctc cgc atc tat gtt tgt gtt act ggc ttt aag cct ttg 633
Lys Cys Asp Leu Arg Ile Tyr Val Cys Val Thr Gly Phe Lys Pro Leu
180 185 190 195

acc att tat gtt tat cag gaa ggg ttg gtt cgg ttt gcc acg gaa aag 681
Thr Ile Tyr Val Tyr Gln Glu Gly Leu Val Arg Phe Ala Thr Glu Lys
200 205 210

ttt gac ctc agt aat ttg caa aac aat tat gcc cat ttg acc aac agc 729
Phe Asp Leu Ser Asn Leu Gln Asn Asn Tyr Ala His Leu Thr Asn Ser
215 220 225

agc atc aat aaa tcc ggg gcc tct tat gag aag atc aaa gaa gtg att 777
Ser Ile Asn Lys Ser Gly Ala Ser Tyr Glu Lys Ile Lys Glu Val Ile
230 235 240

ggt cat ggt tgt aaa tgg acg ctc agc aga ttt ttt tcc tac ctt cgt	825
Gly His Gly Cys Lys Trp Thr Leu Ser Arg Phe Phe Ser Tyr Leu Arg	
245 250 255	
agc tgg gat gtg gac gat ctg ctt ttg tgg aag aaa atc cac cgc atg	873
Ser Trp Asp Val Asp Leu Leu Leu Trp Lys Lys Ile His Arg Met	
260 265 270 275	
gtt att ctc acc att ctc gcc att gca cca tct gtc ccc ttt gct gcc	921
Val Ile Leu Thr Ile Leu Ala Ile Ala Pro Ser Val Pro Phe Ala Ala	
280 285 290	
aat tgc ttt gag ctc ttt ggg ttt gat att ttg att gat gac aac ttg	969
Asn Cys Phe Glu Leu Phe Gly Phe Asp Ile Leu Ile Asp Asp Asn Leu	
295 300 305	
aaa cca tgg ctt tta gag gtc aac tac agc cca gcc ttg acc ttg gat	1017
Lys Pro Trp Leu Leu Glu Val Asn Tyr Ser Pro Ala Leu Thr Leu Asp	
310 315 320	
tgt tca aca gat gtg ttg gtg aag aga aaa ctt gtc cat gat att att	1065
Cys Ser Thr Asp Val Leu Val Lys Arg Lys Leu Val His Asp Ile Ile	
325 330 335	
gac ctg att tac tta aat ggt cta aga aat gag ggg aga gaa gcc agt	1113
Asp Leu Ile Tyr Leu Asn Gly Leu Arg Asn Glu Gly Arg Glu Ala Ser	
340 345 350 355	
aat gcc aca cat gga aat tcc aac atc gac gct gca aaa agt gac aga	1161
Asn Ala Thr His Gly Asn Ser Asn Ile Asp Ala Ala Lys Ser Asp Arg	
360 365 370	
ggt ggg ctt gat gct cct gac tgt ctt cct tat gat tct ctt tcg ttc	1209
Gly Gly Leu Asp Ala Pro Asp Cys Leu Pro Tyr Asp Ser Leu Ser Phe	
375 380 385	
aca agc aga atg tac aac gag gat gac tct gtg gtg gag aaa gct gtg	1257
Thr Ser Arg Met Tyr Asn Glu Asp Asp Ser Val Val Glu Lys Ala Val	
390 395 400	
agt gtg cgt cct gaa gct gca cct gcc tcc cag ctg gaa gga gag atg	1305
Ser Val Arg Pro Glu Ala Ala Pro Ala Ser Gln Leu Glu Gly Glu Met	
405 410 415	
agt ggg cag gat ttt cat ctg tca aca agg gag atg cca caa agc aag	1353
Ser Gly Gln Asp Phe His Leu Ser Thr Arg Glu Met Pro Gln Ser Lys	
420 425 430 435	
ccc aag tta cgg agc agg cac acg cct cac aag aca ctc atg ccc tac	1401
Pro Lys Leu Arg Ser Arg His Thr Pro His Lys Thr Leu Met Pro Tyr	
440 445 450	
gcg tcc ctc ttc cag tcg cac tcc tgc aag acc aag acc tcc ccg tgt	1449
Ala Ser Leu Phe Gln Ser His Ser Cys Lys Thr Lys Thr Ser Pro Cys	
455 460 465	
gtc ctg tca gac cgt ggc aaa gct cca gat ccc caa gca ggc aac ttt	1497
Val Leu Ser Asp Arg Gly Lys Ala Pro Asp Pro Gln Ala Gly Asn Phe	
470 475 480	
gtt ctt gtt ttt cct ttc aat gaa gca act ctc gga gct tcc agg aat	1545
Val Leu Val Phe Pro Phe Asn Glu Ala Thr Leu Gly Ala Ser Arg Asn	
485 490 495	

gga tta aat gtc aaa aga ata atc caa gag ctc cag aaa cta atg aat 1593
 Gly Leu Asn Val Lys Arg Ile Ile Gln Glu Leu Gln Lys Leu Met Asn
 500 505 510 515

aag caa cat tcc taa 1608
 Lys Gln His Ser *
 520

<210> 984
 <211> 1891
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (362) .. (1084)

<220>
 <221> misc_feature
 <222> (1) ... (1891)
 <223> n = a,t,c or g

<400> 984
 ctggtggaat tcgaagcaaa ggggtgtagct gatgtgcaga ttgggattga atgtgggaat 60
 gaggggtgtga tgggagtgat tggaaatatt gcagccctgc atagtctcca tcagggatgt 120
 gacaaagtgg ataatctcta ccacgtgaga aacttccaac attacttgca aatcagattt 180
 aatgaataaa ataaagctgt agcacttggc acattcattg ggacccttac ccaaacatta 240
 tcaatattgt gtacgttatc tttattatca gggtcacaaaa gatgtcataa aagaatttgc 300
 agatgacggc gtcaagtacc tggaactaag gagcacaccc agaagagaaa atgctactgg 360
 a atg act aaa aag act tat gtg gaa tct ata ctt gaa ggt ata aaa 406
 Met Thr Lys Lys Thr Tyr Val Glu Ser Ile Leu Glu Gly Ile Lys
 1 5 10 15
 cag tcc aaa caa gaa aac ttg gac att gat gtt agg tat ttg ata gca 454
 Gln Ser Lys Gln Glu Asn Leu Asp Ile Asp Val Arg Tyr Leu Ile Ala
 20 25 30
 gtt gac aga aga ggt ggc cct tta gta gcc aag gag act gta aaa ctt 502
 Val Asp Arg Arg Gly Gly Pro Leu Val Ala Lys Glu Thr Val Lys Leu
 35 40 45
 gcc gag gag ttc ttc ctt tct act gag ggt aca gtt ctt ggc ctt gac 550
 Ala Glu Glu Phe Phe Leu Ser Thr Glu Gly Thr Val Leu Gly Leu Asp
 50 55 60
 ctc agt gga gac cct act gta gga caa gca aaa gac ttc ttg gaa cct 598
 Leu Ser Gly Asp Pro Thr Val Gly Gln Ala Lys Asp Phe Leu Glu Pro
 65 70 75
 ctt tta gaa gct aag aaa gca ggt ctg aag tta gca ttg cat ctt tca 646
 Leu Leu Glu Ala Lys Lys Ala Gly Leu Lys Leu Ala Leu His Leu Ser
 80 85 90 95

gag att cca aac caa aaa aaa gaa aca caa ata ctc ctg gat ctg ctt 694
 Glu Ile Pro Asn Gln Lys Lys Glu Thr Gln Ile Leu Leu Asp Leu Leu
 100 105 110

cct gac aga atc ggg cat gga aca ttt ctc aac tcc ggt gag gga gga 742
 Pro Asp Arg Ile Gly His Gly Thr Phe Leu Asn Ser Gly Glu Gly Gly
 115 120 125

tcc ctg gat ctg gtg gac ttt gtg agg caa cat cgg ata cca ctg gaa 790
 Ser Leu Asp Leu Val Asp Phe Val Arg Gln His Arg Ile Pro Leu Glu
 130 135 140

ctc tgt ttg acc tca aac gtc aaa agt cag aca gtt cca tct tat gac 838
 Leu Cys Leu Thr Ser Asn Val Lys Ser Gln Thr Val Pro Ser Tyr Asp
 145 150 155

cag cac cat ttc gga ttc tgg tac agc att gcc cat cct tct gtg atc 886
 Gln His His Phe Gly Phe Trp Tyr Ser Ile Ala His Pro Ser Val Ile
 160 165 170 175

tgt act gat gat aag ggt gtt ttt gca aca cac ctt tct caa gag tac 934
 Cys Thr Asp Asp Lys Gly Val Phe Ala Thr His Leu Ser Gln Glu Tyr
 180 185 190

cag ctg gca gct gaa aca ttt aat ttg acc cag tct cag gtg tgg gat 982
 Gln Leu Ala Ala Glu Thr Phe Asn Leu Thr Gln Ser Gln Val Trp Asp
 195 200 205

ctg tct tat gaa tcc atc aac tac atc ttt gct tct gac agc acc aga 1030
 Leu Ser Tyr Glu Ser Ile Asn Tyr Ile Phe Ala Ser Asp Ser Thr Arg
 210 215 220

tct gaa ctg agg aag aaa tgg aat cac ctg aag ccc aga gtg tta cat 1078
 Ser Glu Leu Arg Lys Lys Trp Asn His Leu Lys Pro Arg Val Leu His
 225 230 235

att taa gctataatga ggtgaactac ttctgagtat gtgtttcaat caagttcctg 1134
 Ile *
 240

ccatatccca cttagtaaaa cagtccacca ctcccttgaa gcatagcaac caagttcctt 1194

gggctctatc accagcacct tacacatggc aggtactcag taaatacgtg tcttcaactg 1254

actcacaagc tctcaggtgc ttactgggtg ggacttgact gttgttgcta attaaatccc 1314

cattccacca gtgattattg tgactcagca gtccttcctt attagtgatc ataaaatttc 1374

agggaaatcg aagtttctca tcaggaaatg ttttgggaatt actagtataa agttaggaaa 1434

gtgggggaaat taggttactg ccgagacctt taagccttct aaacagcttt atattttatt 1494

gtgcatactt taatcagact cccttcactc gctttaagtt tttaaaagta ttccccagcc 1554

ggatgtgatg gctcatgcct gtaatcccag cactttggga agccaaagtg ggcagattgc 1614

ttgatcctag gagttcagta gcagcctagg caacatggag aaaccctgtc tctacaaaaa 1674

caaaaaaaca aaaaaccgga aattagtcag gcacggtggt acacacctgt agtcccagcc 1734

accagggagg ctaaggtggg aggagacctg atcccagggg atgtttgagg ctgcagtgag 1794

ctggagtgcg gtgacatgat cacagatcac tgcagctttc agttttaaaa cagcttttat 1854

tacattntct ttgtggaaag ctgatttcta ccttaga

1891

<210> 985
 <211> 133
 <212> PRT
 <213> Homo sapiens

<400> 985
 Met Leu Leu Arg Met Ser Glu His Arg Asn Glu Ala Leu Gly Asn Tyr
 1 5 10 15
 Leu Glu Met Arg Leu Lys Ser Ser Phe Leu Arg Gly Leu Gly Ser Trp
 20 25 30
 Lys Ser Asn Pro Leu Arg Leu Gly Trp Thr Ile Leu Leu Thr Leu
 35 40 45
 Thr Met Gly Gln Gly Glu Pro Gly Gly Pro Gln Gly Asp Pro Trp Val
 50 55 60
 Pro His Glu Leu Leu Leu Pro Ser Leu Cys Asp Ser Ser His Ala Ser
 65 70 75 80
 Ser Trp Gly Ser Gly Ser Ile Thr Cys Ala Trp Arg Gly Gly Asp Ser
 85 90 95
 Ser Ser His Pro Leu Val Ser Gly His Ile Leu Ser Asn Ser Pro Val
 100 105 110
 Ala Ala Val Met Cys Ser Ser Met Gly Thr His Leu Ser Pro Phe Lys
 115 120 125
 Gly Thr Leu Leu *
 130 132

<210> 986
 <211> 851
 <212> PRT
 <213> Homo sapiens

<400> 986
 Lys Ala Ile Arg Met Phe Lys Cys Trp Ser Val Val Leu Val Leu Gly
 1 5 10 15
 Phe Ile Phe Leu Glu Ser Glu Gly Arg Pro Thr Lys Glu Gly Gly Tyr
 20 25 30
 Gly Leu Lys Ser Tyr Gln Pro Leu Met Arg Leu Arg His Lys Gln Glu
 35 40 45
 Lys Asn Gln Glu Ser Ser Arg Val Lys Gly Phe Met Ile Gln Asp Gly
 50 55 60
 Pro Leu Gly Ser Cys Glu Asn Lys Tyr Cys Gly Leu Gly Arg His Cys
 65 70 75 80
 Val Ala Ser Arg Glu Thr Gly Gln Ala Glu Cys Ala Cys Met Asp Leu
 85 90 95
 Cys Lys Arg His Tyr Arg Pro Val Cys Gly Ser Asp Gly Glu Phe Tyr
 100 105 110
 Glu Asn His Cys Glu Val His Arg Ala Ala Cys Leu Lys Lys Gln Lys
 115 120 125
 Ile Thr Ile Val His Asn Glu Asp Cys Phe Phe Lys Gly Asp Lys Cys
 130 135 140
 Lys Thr Thr Glu Tyr Ser Lys Met Lys Asn Met Leu Leu Asp Leu Gln
 145 150 155 160
 Asn Gln Lys Tyr Ile Met Gln Glu Asn Glu Asn Pro Asn Gly Asp Asp
 165 170 175
 Ile Ser Arg Lys Lys Leu Leu Val Asp Gln Met Phe Lys Tyr Phe Asp
 180 185 190
 Ala Asp Ser Asn Gly Leu Val Asp Ile Asn Glu Leu Thr Gln Val Ile
 195 200 205

Lys	Gln	Glu	Glu	Leu	Gly	Lys	Asp	Leu	Phe	Asp	Cys	Thr	Leu	Tyr	Val
210						215					220				
Leu	Leu	Lys	Tyr	Asp	Asp	Phe	Asn	Ala	Asp	Lys	His	Leu	Ala	Leu	Glu
225					230					235					240
Glu	Phe	Tyr	Arg	Ala	Phe	Gln	Val	Ile	Gln	Leu	Ser	Leu	Pro	Glu	Asp
				245					250					255	
Gln	Lys	Leu	Ser	Ile	Thr	Ala	Ala	Thr	Val	Gly	Gln	Ser	Ala	Val	Leu
			260					265					270		
Ser	Cys	Ala	Ile	Gln	Gly	Thr	Leu	Arg	Pro	Pro	Ile	Ile	Trp	Lys	Arg
		275					280					285			
Asn	Asn	Ile	Ile	Leu	Asn	Asn	Leu	Asp	Leu	Glu	Asp	Ile	Asn	Asp	Phe
290						295					300				
Gly	Asp	Asp	Gly	Ser	Leu	Tyr	Ile	Thr	Lys	Val	Thr	Thr	Thr	His	Val
305					310					315					320
Gly	Asn	Tyr	Thr	Cys	Tyr	Ala	Asp	Gly	Tyr	Glu	Gln	Val	Tyr	Gln	Thr
				325					330					335	
His	Ile	Phe	Gln	Val	Asn	Val	Pro	Pro	Val	Ile	Arg	Val	Tyr	Pro	Glu
			340					345					350		
Ser	Gln	Ala	Arg	Glu	Pro	Gly	Val	Thr	Ala	Ser	Leu	Arg	Cys	His	Ala
		355					360					365			
Glu	Gly	Ile	Pro	Lys	Pro	Gln	Leu	Gly	Trp	Leu	Lys	Asn	Gly	Ile	Asp
370						375					380				
Ile	Thr	Pro	Lys	Leu	Ser	Lys	Gln	Leu	Thr	Leu	Gln	Ala	Asn	Gly	Ser
385					390					395					400
Glu	Val	His	Ile	Ser	Asn	Val	Arg	Tyr	Glu	Asp	Thr	Gly	Ala	Tyr	Thr
				405					410					415	
Cys	Ile	Ala	Lys	Asn	Glu	Ala	Gly	Val	Tyr	Glu	Asp	Ile	Ser	Ser	Leu
			420				425						430		
Phe	Val	Glu	Asp	Ser	Ala	Arg	Lys	Thr	Leu	Ala	Asn	Ile	Leu	Trp	Arg
		435					440					445			
Glu	Glu	Gly	Leu	Gly	Ile	Gly	Asn	Met	Phe	Tyr	Val	Phe	Tyr	Glu	Asp
450						455					460				
Gly	Ile	Lys	Val	Ile	Gln	Pro	Ile	Glu	Cys	Glu	Phe	Gln	Arg	His	Ile
465					470					475					480
Lys	Pro	Ser	Glu	Lys	Leu	Leu	Gly	Phe	Gln	Asp	Glu	Val	Cys	Pro	Lys
				485					490					495	
Ala	Glu	Gly	Asp	Glu	Val	Gln	Arg	Cys	Val	Trp	Ala	Ser	Ala	Val	Asn
			500					505					510		
Val	Lys	Asp	Lys	Phe	Ile	Tyr	Val	Ala	Gln	Pro	Thr	Leu	Asp	Arg	Val
		515					520					525			
Leu	Ile	Val	Asp	Val	Gln	Ser	Gln	Lys	Val	Val	Gln	Ala	Val	Ser	Thr
530						535					540				
Asp	Pro	Val	Pro	Val	Lys	Leu	His	Tyr	Asp	Lys	Ser	His	Asp	Gln	Val
545					550					555					560
Trp	Val	Leu	Ser	Trp	Gly	Thr	Leu	Glu	Lys	Thr	Ser	Pro	Thr	Leu	Gln
				565					570					575	
Val	Ile	Thr	Leu	Ala	Ser	Gly	Asn	Val	Pro	His	His	Thr	Ile	His	Thr
			580				585						590		
Gln	Pro	Val	Gly	Lys	Gln	Phe	Asp	Arg	Val	Asp	Asp	Phe	Phe	Ile	Pro
		595					600					605			
Thr	Thr	Thr	Leu	Ile	Ile	Thr	His	Met	Arg	Phe	Gly	Phe	Ile	Leu	His
610						615					620				
Lys	Asp	Glu	Ala	Ala	Leu	Gln	Lys	Ile	Asp	Leu	Glu	Thr	Met	Ser	Tyr
625					630					635					640
Ile	Lys	Thr	Ile	Asn	Leu	Lys	Asp	Tyr	Lys	Cys	Val	Pro	Gln	Ser	Leu
				645					650					655	
Ala	Tyr	Thr	His	Leu	Gly	Gly	Tyr	Tyr	Phe	Ile	Gly	Cys	Lys	Pro	Asp
			660				665					670			
Ser	Thr	Gly	Ala	Val	Ser	Pro	Gln	Val	Met	Val	Asp	Gly	Val	Thr	Asp
		675					680					685			
Ser	Val	Ile	Gly	Phe	Asn	Ser	Asp	Val	Thr	Gly	Thr	Pro	Tyr	Val	Ser
690						695					700				
Pro	Asp	Gly	His	Tyr	Leu	Val	Ser	Ile	Asn	Asp	Val	Lys	Gly	Leu	Val
705					710					715					720

Arg Val Gln Tyr Ile Thr Ile Arg Gly Glu Ile Gln Glu Ala Phe Asp
 725 730 735
 Ile Tyr Thr Asn Leu His Ile Ser Asp Leu Ala Phe Gln Pro Ser Phe
 740 745 750
 Thr Glu Ala His Gln Tyr Asn Ile Tyr Gly Ser Ser Ser Thr Gln Thr
 755 760 765
 Asp Val Leu Phe Val Glu Leu Ser Ser Gly Lys Val Lys Met Ile Lys
 770 775 780
 Ser Leu Lys Glu Pro Leu Lys Ala Glu Glu Trp Pro Trp Asn Arg Lys
 785 790 795 800
 Asn Arg Gln Ile Gln Asp Ser Gly Leu Phe Gly Gln Tyr Leu Met Thr
 805 810 815
 Pro Ser Lys Asp Ser Leu Phe Ile Leu Asp Gly Arg Leu Asn Lys Leu
 820 825 830
 Asn Cys Glu Ile Thr Glu Val Glu Lys Gly Asn Thr Val Ile Trp Val
 835 840 845
 Gly Asp Ala
 850 851

<210> 987
 <211> 804
 <212> PRT
 <213> Homo sapiens

<400> 987
 Met Arg Ala Leu Trp Val Leu Gly Leu Cys Cys Val Leu Leu Thr Phe
 1 5 10 15
 Gly Ser Val Arg Ala Asp Asp Glu Val Asp Val Asp Gly Thr Val Glu
 20 25 30
 Glu Asp Leu Gly Lys Ser Arg Glu Gly Ser Arg Thr Asp Asp Glu Val
 35 40 45
 Val Gln Arg Glu Glu Glu Ala Ile Gln Leu Asp Gly Leu Asn Ala Ser
 50 55 60
 Gln Ile Arg Glu Leu Arg Glu Lys Ser Glu Lys Phe Ala Phe Gln Ala
 65 70 75 80
 Glu Val Asn Arg Met Met Lys Leu Ile Ile Asn Ser Leu Tyr Lys Asn
 85 90 95
 Lys Glu Ile Phe Leu Arg Glu Leu Ile Ser Asn Ala Ser Asp Ala Leu
 100 105 110
 Asp Lys Ile Arg Leu Ile Ser Leu Thr Asp Glu Asn Ala Leu Ser Gly
 115 120 125
 Asn Glu Glu Leu Thr Val Lys Ile Lys Cys Asp Lys Glu Lys Asn Leu
 130 135 140
 Leu His Val Thr Asp Thr Gly Val Gly Met Thr Arg Glu Glu Leu Val
 145 150 155 160
 Lys Asn Leu Gly Thr Ile Ala Lys Ser Gly Thr Ser Glu Phe Leu Asn
 165 170 175
 Lys Met Thr Glu Ala Gln Glu Asp Gly Gln Ser Thr Ser Glu Leu Ile
 180 185 190
 Gly Gln Phe Gly Val Gly Phe Tyr Ser Ala Phe Leu Val Ala Asp Lys
 195 200 205
 Val Ile Val Thr Ser Lys His Asn Asn Asp Thr Gln His Ile Trp Glu
 210 215 220
 Ser Asp Ser Asn Glu Phe Ser Val Ile Ala Asp Pro Arg Gly Asn Thr
 225 230 235 240
 Leu Gly Arg Gly Thr Thr Ile Thr Leu Val Leu Lys Glu Glu Ala Ser
 245 250 255
 Asp Tyr Leu Glu Leu Asp Thr Ile Lys Asn Leu Val Lys Lys Tyr Ser
 260 265 270
 Gln Phe Ile Asn Phe Pro Ile Tyr Val Trp Ser Ser Lys Thr Glu Thr
 275 280 285

Val Glu Glu Pro Met Glu Glu Glu Glu Ala Ala Lys Glu Glu Lys Glu
290 295 300
Glu Ser Asp Asp Glu Ala Ala Val Glu Glu Glu Glu Glu Lys Lys
305 310 315 320
Pro Lys Thr Lys Lys Val Glu Lys Thr Val Trp Asp Trp Glu Leu Met
325 330 335
Asn Asp Ile Lys Pro Ile Trp Gln Arg Pro Ser Lys Glu Val Glu Glu
340 345 350
Asp Glu Tyr Lys Ala Phe Tyr Lys Ser Phe Ser Lys Glu Ser Asp Asp
355 360 365
Pro Met Ala Tyr Ile His Phe Thr Ala Glu Gly Glu Val Thr Phe Lys
370 375 380
Ser Ile Leu Phe Val Pro Thr Ser Ala Pro Arg Gly Leu Phe Asp Glu
385 390 395 400
Tyr Gly Ser Lys Lys Ser Asp Tyr Ile Lys Leu Tyr Val Arg Arg Val
405 410 415
Phe Ile Thr Asp Asp Phe His Asp Met Met Pro Lys Tyr Leu Asn Phe
420 425 430
Val Lys Gly Val Val Asp Ser Asp Asp Leu Pro Leu Asn Val Ser Arg
435 440 445
Glu Thr Leu Gln Gln His Lys Leu Leu Lys Val Ile Arg Lys Lys Leu
450 455 460
Val Arg Lys Thr Leu Asp Met Ile Lys Lys Ile Ala Asp Asp Lys Tyr
465 470 475 480
Asn Asp Thr Phe Trp Lys Glu Phe Gly Thr Asn Ile Lys Leu Gly Val
485 490 495
Ile Glu Asp His Ser Asn Arg Thr Arg Leu Ala Lys Leu Leu Arg Phe
500 505 510
Gln Ser Ser His His Pro Thr Asp Ile Thr Ser Leu Asp Gln Tyr Val
515 520 525
Glu Arg Met Lys Glu Lys Gln Asp Lys Ile Tyr Phe Met Ala Gly Ser
530 535 540
Ser Arg Lys Glu Ala Glu Ser Ser Pro Phe Val Glu Arg Leu Leu Lys
545 550 555 560
Lys Gly Tyr Glu Val Ile Tyr Leu Thr Glu Pro Val Asp Glu Tyr Cys
565 570 575
Ile Gln Ala Leu Pro Glu Phe Asp Gly Lys Arg Phe Gln Asn Val Ala
580 585 590
Lys Glu Gly Val Lys Phe Asp Glu Ser Glu Lys Thr Lys Glu Ser Arg
595 600 605
Glu Ala Val Glu Lys Glu Phe Glu Pro Leu Leu Asn Trp Met Lys Asp
610 615 620
Lys Ala Leu Lys Asp Lys Ile Glu Lys Ala Val Val Ser Gln Arg Leu
625 630 635 640
Thr Glu Ser Pro Cys Ala Leu Val Ala Ser Gln Tyr Gly Trp Ser Gly
645 650 655
Asn Met Glu Arg Ile Met Lys Ala Gln Ala Tyr Gln Thr Gly Lys Asp
660 665 670
Ile Ser Thr Asn Tyr Tyr Ala Ser Gln Lys Lys Thr Phe Glu Ile Asn
675 680 685
Pro Arg His Pro Leu Ile Arg Asp Met Leu Arg Arg Ile Lys Glu Asp
690 695 700
Glu Asp Asp Lys Thr Val Leu Asp Leu Ala Val Val Leu Phe Glu Thr
705 710 715 720
Ala Thr Leu Arg Ser Gly Tyr Leu Leu Pro Asp Thr Lys Ala Tyr Gly
725 730 735
Asp Arg Ile Glu Arg Met Leu Arg Leu Ser Leu Asn Ile Asp Pro Asp
740 745 750
Ala Lys Val Glu Glu Glu Pro Glu Glu Glu Pro Glu Glu Thr Ala Glu
755 760 765
Asp Thr Thr Glu Asp Thr Glu Gln Asp Glu Asp Glu Glu Met Asp Val
770 775 780
Gly Thr Asp Glu Glu Glu Glu Thr Ala Lys Glu Ser Thr Ala Glu Lys
785 790 795 800

Asp Glu Leu *
803

<210> 988
<211> 83
<212> PRT
<213> Homo sapiens

<400> 988
Leu Arg Asn Ser Ala Arg Gly Arg Leu Gln Gln Ile Gly Ala Met Ala
1 5 10 15
Leu Glu Gln Asn Gln Ser Thr Asp Tyr Tyr Tyr Glu Glu Asn Glu Met
20 25 30
Asn Gly Thr Tyr Asp Tyr Ser Gln Tyr Glu Leu Ile Cys Ile Lys Glu
35 40 45
Asp Val Arg Glu Phe Ala Lys Val Phe Leu Pro Val Phe Leu Thr Ile
50 55 60
Val Phe Val Ile Gly Leu Ala Gly Asn Ser Met Val Val Ala Ile Tyr
65 70 75 80
Ala Lys His
83

<210> 989
<211> 140
<212> PRT
<213> Homo sapiens

<400> 989
Met Lys Glu Lys Met Trp Gln Asn Val Leu Cys Cys Thr Leu Gln Thr
1 5 10 15
Ala Val Ile Leu Lys Leu Phe Gln Asn Lys Val Leu Asn Ile Leu Lys
20 25 30
Asn Phe Phe Leu Ser Pro Leu Asp Thr Arg Lys Asn Lys Val Phe Lys
35 40 45
Lys Trp Ala Gly Gly Pro Gly Ala Val Ala His Ala Cys Asn Pro Ser
50 55 60
Thr Leu Gly Gly Arg Gly Arg Ile Thr Lys Ser Gly Asp Arg Asp
65 70 75 80
His Pro Gly Gln His Gly Glu Thr Arg Ser Leu Leu Lys Val Gln Lys
85 90 95
Ile Ser Gln Val Trp Trp Gln Met Thr Val Gly Gln Ala Asn Trp Glu
100 105 110
Ala Glu Ala Gly Glu Trp Cys Glu Pro Gly Glu Gly Arg Ala Cys Ser
115 120 125
Glu Pro Arg Ser Pro Thr Ala Leu Gln Thr Gly *
130 135 139

<210> 990
<211> 273
<212> PRT
<213> Homo sapiens

<400> 990
Met His Leu Arg Leu Ile Ser Trp Leu Phe Ile Ile Leu Asn Phe Met
1 5 10 15

Glu Tyr Ile Gly Ser Gln Asn Ala Ser Arg Gly Arg Arg Gln Arg Arg
 20 25 30
 Met His Pro Asn Val Ser Gln Gly Cys Gln Gly Gly Cys Ala Thr Cys
 35 40 45
 Ser Asp Tyr Asn Gly Cys Leu Ser Cys Lys Pro Arg Leu Phe Phe Ala
 50 55 60
 Leu Glu Arg Ile Gly Met Lys Gln Ile Gly Val Cys Leu Ser Ser Cys
 65 70 75 80
 Pro Ser Gly Tyr Tyr Gly Thr Arg Tyr Pro Asp Ile Asn Lys Cys Thr
 85 90 95
 Lys Cys Lys Ala Asp Cys Asp Thr Cys Phe Asn Lys Asn Phe Cys Thr
 100 105 110
 Lys Cys Lys Ser Gly Phe Tyr Leu His Leu Gly Lys Cys Leu Asp Asn
 115 120 125
 Cys Pro Glu Gly Leu Glu Ala Asn Asn His Thr Met Glu Cys Val Ser
 130 135 140
 Ile Val His Cys Glu Val Ser Glu Trp Asn Pro Trp Ser Pro Cys Thr
 145 150 155 160
 Lys Lys Gly Lys Thr Cys Gly Phe Lys Arg Gly Thr Glu Thr Arg Val
 165 170 175
 Arg Glu Ile Ile Gln His Pro Ser Ala Lys Gly Asn Leu Cys Pro Pro
 180 185 190
 Thr Asn Glu Thr Arg Lys Cys Thr Val Gln Arg Lys Lys Cys Gln Lys
 195 200 205
 Gly Glu Arg Gly Lys Lys Gly Arg Glu Arg Lys Arg Lys Lys Pro Asn
 210 215 220
 Lys Gly Glu Ser Lys Glu Ala Ile Pro Asp Ser Lys Ser Leu Glu Ser
 225 230 235 240
 Ser Lys Glu Ile Pro Glu Gln Arg Glu Asn Lys Gln Gln Gln Lys Lys
 245 250 255
 Arg Lys Val Gln Asp Lys Gln Lys Ser Val Ser Val Ser Thr Val His
 260 265 270 272

*

<210> 991
 <211> 265
 <212> PRT
 <213> Homo sapiens

<400> 991
 Met Asp Pro Thr Ile Ser Thr Leu Asp Thr Glu Leu Thr Pro Ile Asn
 1 5 10 15
 Gly Thr Glu Glu Thr Leu Cys Tyr Lys Gln Thr Leu Ser Leu Thr Val
 20 25 30
 Leu Thr Cys Ile Val Ser Leu Val Gly Leu Thr Gly Asn Ala Val Val
 35 40 45
 Leu Trp Leu Leu Gly Cys Arg Met Arg Arg Asn Ala Phe Ser Ile Tyr
 50 55 60
 Ile Leu Asn Leu Ala Ala Ala Asp Phe Leu Phe Leu Ser Gly Arg Leu
 65 70 75 80
 Ile Tyr Ser Leu Leu Ser Phe Ile Ser Ile Pro His Thr Ile Ser Lys
 85 90 95
 Ile Leu Tyr Pro Val Met Met Phe Ser Tyr Phe Ala Gly Leu Ser Met
 100 105 110
 Leu Ser Thr Ile Ser Thr Glu His Arg Leu Ser Val Leu Trp Pro Ile
 115 120 125
 Trp Tyr Cys Cys His Cys Pro Thr His Leu Ser Ala Val Met Cys Val
 130 135 140
 Leu Leu Trp Ala Leu Ser Leu Leu Gln Ser Ile Leu Glu Trp Met Phe
 145 150 155 160

```
<210> 992
<211> 79
<212> PRT
<213> Homo sapiens
```

```
<210> 993
<211> 646
<212> PRT
<213> Homo sapiens
```

2732

Ile Gln Asn Gly Arg Glu Leu Phe Glu Ser Ser Leu Cys Gly Asp Leu
165 170 175
Leu Asn Glu Val Gln Ala Ser Glu His Thr Lys Ser Lys His Glu Ser
180 185 190
Arg Lys Glu Lys Arg Lys Lys Ser Asn Lys His Asp Ser Ser Arg Ser
195 200 205
Glu Glu Arg Lys Ser His Lys Ile Pro Lys Leu Glu Pro Glu Glu Gln
210 215 220
Asn Arg Pro Asn Glu Arg Val Asp Thr Val Ser Glu Lys Pro Arg Glu
225 230 235 240
Glu Pro Val Leu Lys Glu Glu Ala Pro Val Gln Pro Ile Leu Ser Ser
245 250 255
Val Pro Thr Thr Glu Val Ser Thr Gly Val Lys Phe Gln Val Gly Asp
260 265 270
Leu Val Trp Ser Lys Val Gly Thr Tyr Pro Trp Trp Pro Cys Met Val
275 280 285
Ser Ser Asp Pro Gln Leu Glu Val His Thr Lys Ile Asn Thr Arg Gly
290 295 300
Ala Arg Glu Tyr His Val Gln Phe Phe Ser Asn Gln Pro Glu Arg Ala
305 310 315 320
Trp Val His Glu Lys Arg Val Arg Glu Tyr Lys Gly His Lys Gln Tyr
325 330 335
Glu Glu Leu Leu Ala Glu Ala Thr Lys Gln Ala Ser Asn His Ser Glu
340 345 350
Lys Gln Lys Ile Arg Lys Pro Arg Pro Gln Arg Glu Arg Ala Gln Trp
355 360 365
Asp Ile Gly Ile Ala His Ala Glu Lys Ala Leu Lys Met Thr Arg Glu
370 375 380
Glu Arg Ile Glu Gln Tyr Thr Phe Ile Tyr Ile Asp Lys Gln Pro Glu
385 390 395 400
Glu Ala Leu Ser Gln Ala Lys Lys Ser Val Ala Ser Lys Thr Glu Val
405 410 415
Lys Lys Thr Arg Arg Pro Arg Ser Val Leu Asn Thr Gln Pro Glu Gln
420 425 430
Thr Asn Ala Gly Glu Val Ala Ser Ser Leu Ser Ser Thr Glu Ile Arg
435 440 445
Arg His Ser Gln Arg Arg His Thr Ser Ala Glu Glu Glu Glu Pro Pro
450 455 460
Pro Val Lys Ile Ala Trp Lys Thr Ala Ala Ala Arg Lys Ser Leu Pro
465 470 475 480
Ala Ser Ile Thr Met His Lys Gly Ser Leu Asp Leu Gln Lys Cys Asn
485 490 495
Met Ser Pro Val Val Lys Ile Glu Gln Val Phe Ala Leu Gln Asn Ala
500 505 510
Thr Gly Asp Gly Lys Phe Ile Asp Gln Phe Val Tyr Ser Thr Lys Gly
515 520 525
Ile Gly Asn Lys Thr Glu Ile Ser Val Arg Gly Gln Asp Arg Leu Ile
530 535 540
Ile Ser Thr Pro Asn Gln Arg Asn Glu Lys Pro Thr Gln Ser Val Ser
545 550 555 560
Ser Pro Glu Ala Thr Ser Gly Ser Thr Gly Ser Val Glu Lys Lys Gln
565 570 575
Gln Arg Arg Ser Ile Arg Thr Arg Ser Glu Ser Glu Lys Ser Thr Glu
580 585 590
Val Val Pro Lys Lys Lys Ile Lys Lys Glu Gln Val Glu Thr Val Pro
595 600 605
Gln Ala Thr Val Lys Thr Gly Leu Gln Lys Gly Ser Ala Asp Arg Gly
610 615 620
Val Gln Gly Ser Val Arg Phe Ser Asp Ser Ser Val Ser Ala Ala Ile
625 630 635 640
Glu Glu Thr Val Asp *
645

<210> 994
 <211> 456
 <212> PRT
 <213> Homo sapiens

<400> 994
 Met Ser Ser Ser Gly Leu Asn Ser Glu Lys Val Ala Ala Leu Ile Gln
 1 5 10 15
 Lys Leu Asn Ser Asp Pro Gln Phe Val Leu Ala Gln Asn Val Gly Thr
 20 25 30
 Thr His Asp Leu Leu Asp Ile Cys Leu Lys Arg Ala Thr Val Gln Arg
 35 40 45
 Ala Gln His Val Phe Gln His Ala Val Pro Gln Glu Gly Lys Pro Ile
 50 55 60
 Thr Asn Gln Lys Ser Ser Gly Arg Cys Trp Ile Phe Ser Cys Leu Asn
 65 70 75 80
 Val Met Arg Leu Pro Phe Met Lys Lys Leu Asn Ile Glu Glu Phe Glu
 85 90 95
 Phe Ser Gln Ser Tyr Leu Phe Phe Trp Asp Lys Val Glu Arg Cys Tyr
 100 105 110
 Phe Phe Leu Ser Ala Phe Val Asp Thr Ala Gln Arg Lys Glu Pro Glu
 115 120 125
 Asp Gly Arg Leu Val Gln Phe Leu Leu Met Asn Pro Ala Asn Asp Gly
 130 135 140
 Gly Gln Trp Asp Met Leu Val Asn Ile Val Glu Lys Tyr Gly Val Ile
 145 150 155 160
 Pro Lys Lys Cys Phe Pro Glu Ser Tyr Thr Thr Glu Ala Thr Arg Arg
 165 170 175
 Met Asn Asp Ile Leu Asn His Lys Met Arg Glu Phe Cys Ile Arg Leu
 180 185 190
 Arg Asn Leu Val His Ser Gly Ala Thr Lys Gly Glu Ile Ser Ala Thr
 195 200 205
 Gln Asp Val Met Met Glu Glu Ile Phe Arg Val Val Cys Ile Cys Leu
 210 215 220
 Gly Asn Pro Pro Glu Thr Phe Thr Trp Glu Tyr Arg Asp Lys Asp Lys
 225 230 235 240
 Asn Tyr Gln Lys Ile Gly Pro Ile Thr Pro Leu Glu Phe Tyr Arg Glu
 245 250 255
 His Val Lys Pro Leu Phe Asn Met Glu Asp Lys Ile Cys Leu Val Asn
 260 265 270
 Asp Pro Arg Pro Gln His Lys Tyr Asn Lys Leu Tyr Thr Val Glu Tyr
 275 280 285
 Leu Ser Asn Met Val Gly Gly Arg Lys Thr Leu Tyr Asn Asn Gln Pro
 290 295 300
 Ile Asp Phe Leu Lys Lys Met Val Ala Ala Ser Ile Lys Asp Gly Glu
 305 310 315 320
 Ala Val Trp Phe Gly Cys Asp Val Gly Lys His Phe Asn Ser Lys Leu
 325 330 335
 Gly Leu Ser Asp Met Asn Leu Tyr Asp His Glu Leu Val Phe Gly Val
 340 345 350
 Ser Leu Lys Asn Met Asn Lys Ala Glu Arg Leu Thr Phe Gly Glu Ser
 355 360 365
 Leu Met Thr His Ala Met Thr Phe Thr Ala Val Ser Glu Lys Asp Asp
 370 375 380
 Gln Asp Gly Ala Phe Thr Lys Trp Arg Val Glu Asn Ser Trp Gly Glu
 385 390 395 400
 Asp His Gly His Lys Gly Tyr Leu Cys Met Thr Asp Glu Trp Phe Ser
 405 410 415
 Glu Tyr Val Tyr Glu Val Val Val Asp Arg Lys His Val Pro Glu Glu
 420 425 430
 Val Leu Ala Val Leu Glu Gln Glu Pro Ile Ile Leu Pro Ala Trp Asp
 435 440 445

Pro Met Gly Ala Leu Ala Glu *
450 455

<210> 995
<211> 85
<212> PRT
<213> Homo sapiens

<400> 995
Met Arg Leu Arg Phe Asn Asn Asp Arg Met Lys Thr Thr Ile Lys Glu
1 5 10 15
Thr Thr Ile Leu Ser Ser Ala Ile Leu Thr Phe Leu Thr Tyr Leu Met
20 25 30
Lys Met Ser Phe Glu Arg Cys Thr Ala Arg Asn Lys Met Phe Val Asn
35 40 45
Ser Pro Phe Tyr Pro Arg Val Asp Asn Tyr Cys Thr Ser Ser Trp Lys
50 55 60
Lys Phe Tyr Leu Lys Cys Tyr Phe Ser Leu Asn Thr Ile Lys Lys Glu
65 70 75 80
Lys Lys Met Thr *
84

<210> 996
<211> 801
<212> PRT
<213> Homo sapiens

<400> 996
Met Leu Ile Gln Ser Glu Lys Lys Thr Gln Leu Ser Lys Thr Glu Ser
1 5 10 15
Val Lys Glu Ser Glu Ser Leu Met Glu Phe Ala Gln Pro Glu Ile Gln
20 25 30
Pro Gln Glu Phe Leu Asn Arg Arg Tyr Met Thr Glu Val Asp Tyr Ser
35 40 45
Asn Lys Gln Gly Glu Glu Gln Pro Trp Glu Ala Asp Tyr Ala Arg Lys
50 55 60
Pro Asn Leu Pro Lys Arg Trp Asp Met Leu Thr Glu Pro Asp Gly Gln
65 70 75 80
Glu Lys Lys Gln Glu Ser Phe Lys Ser Trp Glu Ala Ser Gly Lys His
85 90 95
Gln Glu Val Ser Lys Pro Ala Val Ser Leu Glu Gln Arg Lys Gln Asp
100 105 110
Thr Ser Lys Leu Arg Ser Thr Leu Pro Glu Glu Gln Lys Lys Gln Glu
115 120 125
Ile Ser Lys Ser Lys Pro Ser Pro Ser Gln Trp Lys Gln Asp Thr Pro
130 135 140
Lys Ser Lys Ala Gly Tyr Val Gln Glu Glu Gln Lys Lys Gln Glu Thr
145 150 155 160
Pro Lys Leu Trp Pro Val Gln Leu Gln Lys Glu Gln Asp Pro Lys Lys
165 170 175
Gln Thr Pro Lys Ser Trp Thr Pro Ser Met Gln Ser Glu Gln Asn Thr
180 185 190
Thr Lys Ser Trp Thr Thr Pro Met Cys Glu Glu Gln Asp Ser Lys Gln
195 200 205
Pro Glu Thr Pro Lys Ser Trp Glu Asn Asn Val Glu Ser Gln Lys His
210 215 220
Ser Leu Thr Ser Gln Ser Gln Ile Ser Pro Lys Ser Trp Gly Val Ala
225 230 235 240

Thr	Ala	Ser	Leu	Ile	Pro	Asn	Asp	Gln	Leu	Leu	Pro	Arg	Lys	Leu	Asn	245	250	255
Thr	Glu	Pro	Lys	Asp	Val	Pro	Lys	Pro	Val	His	Gln	Pro	Val	Gly	Ser	260	265	270
Ser	Ser	Thr	Leu	Pro	Lys	Asp	Pro	Val	Leu	Arg	Lys	Glu	Lys	Leu	Gln	275	280	285
Asp	Leu	Met	Thr	Gln	Ile	Gln	Gly	Thr	Cys	Asn	Phe	Met	Gln	Glu	Ser	290	295	300
Val	Leu	Asp	Phe	Asp	Lys	Pro	Ser	Ser	Ala	Ile	Pro	Thr	Ser	Gln	Pro	305	310	315
Pro	Ser	Ala	Thr	Pro	Gly	Ser	Pro	Val	Ala	Ser	Lys	Glu	Gln	Asn	Leu	325	330	335
Ser	Ser	Gln	Ser	Asp	Phe	Leu	Gln	Glu	Pro	Leu	Gln	Ala	Thr	Ser	Ser	340	345	350
Pro	Val	Thr	Cys	Ser	Ser	Asn	Ala	Cys	Leu	Val	Thr	Thr	Asp	Gln	Ala	355	360	365
Ser	Ser	Gly	Ser	Glu	Thr	Glu	Phe	Met	Thr	Ser	Glu	Thr	Pro	Glu	Ala	370	375	380
Ala	Ile	Pro	Pro	Gly	Lys	Gln	Pro	Ser	Ser	Leu	Ala	Ser	Pro	Asn	Pro	385	390	395
Pro	Met	Ala	Lys	Gly	Ser	Glu	Gln	Gly	Phe	Gln	Ser	Pro	Pro	Ala	Ser	405	410	415
Ser	Ser	Ser	Val	Thr	Ile	Asn	Thr	Ala	Pro	Phe	Gln	Ala	Met	Gln	Thr	420	425	430
Val	Phe	Asn	Val	Asn	Ala	Pro	Leu	Pro	Pro	Arg	Lys	Glu	Gln	Glu	Ile	435	440	445
Lys	Glu	Ser	Pro	Tyr	Ser	Pro	Gly	Tyr	Asn	Gln	Ser	Phe	Thr	Thr	Ala	450	455	460
Ser	Thr	Gln	Thr	Pro	Pro	Gln	Cys	Gln	Leu	Pro	Ser	Ile	His	Val	Glu	465	470	475
Gln	Thr	Val	His	Ser	Gln	Glu	Thr	Ala	Asn	Tyr	His	Pro	Asp	Gly	Thr	485	490	495
Ile	Gln	Val	Ser	Asn	Gly	Ser	Leu	Ala	Phe	Tyr	Pro	Ala	Gln	Thr	Asn	500	505	510
Val	Phe	Pro	Arg	Pro	Thr	Gln	Pro	Phe	Val	Asn	Ser	Arg	Gly	Ser	Val	515	520	525
Arg	Gly	Cys	Thr	Arg	Gly	Gly	Arg	Leu	Ile	Thr	Asn	Ser	Tyr	Arg	Ser	530	535	540
Pro	Gly	Gly	Tyr	Lys	Gly	Phe	Asp	Thr	Tyr	Arg	Gly	Leu	Pro	Ser	Ile	545	550	555
Ser	Asn	Gly	Asn	Tyr	Ser	Gln	Leu	Gln	Phe	Gln	Ala	Arg	Glu	Tyr	Ser	565	570	575
Gly	Ala	Pro	Tyr	Ser	Gln	Arg	Cys	Leu	Glu	Thr	Ser	Glu	Pro	Leu	Trp	580	585	590
Leu	Leu	Gly	Lys	Ala	Arg	Ile	Ile	Ser	Ser	Ser	Val	Ile	Ser	Glu	Glu	595	600	605
Gly	His	Leu	Val	Val	His	Glu	Gln	Ile	Arg	Glu	Val	Ser	Ser	Pro	Glu	610	615	620
Arg	Asp	Asn	Glu	Thr	Phe	Asn	Ser	Gly	Asp	Ser	Gly	Gln	Gly	Asp	Ser	625	630	635
Arg	Ser	Met	Thr	Pro	Val	Asp	Val	Pro	Val	Thr	Asn	Pro	Ala	Ala	Thr	645	650	655
Ile	Leu	Pro	Val	His	Val	Tyr	Pro	Leu	Pro	Gln	Gln	Met	Arg	Val	Ala	660	665	670
Phe	Ser	Ala	Ala	Arg	Thr	Ser	Asn	Leu	Ala	Pro	Gly	Thr	Leu	Asp	Gln	675	680	685
Pro	Ile	Val	Phe	Asp	Leu	Leu	Leu	Asn	Asn	Leu	Gly	Glu	Thr	Phe	Asp	690	695	700
Leu	Gln	Leu	Gly	Arg	Phe	Asn	Cys	Pro	Val	Asn	Gly	Thr	Tyr	Val	Phe	705	710	715
Ile	Phe	His	Met	Leu	Lys	Leu	Ala	Val	Asn	Val	Pro	Leu	Tyr	Val	Asn	725	730	735
Leu	Met	Lys	Asn	Glu	Glu	Val	Leu	Val	Ser	Ala	Tyr	Ala	Asn	Asp	Gly	740	745	750

Ala Pro Asp His Glu Thr Ala Ser Asn His Ala Ile Leu Gln Leu Phe
 755 760 765
 Gln Gly Asp Gln Ile Trp Leu Arg Leu His Arg Gly Ala Ile Tyr Gly
 770 775 780
 Ser Ser Trp Lys Tyr Ser Thr Phe Ser Gly Tyr Leu Leu Tyr Gln Asp
 785 790 795 800
 *

<210> 997
 <211> 711
 <212> PRT
 <213> Homo sapiens

<400> 997
 Met Leu Ile Gln Ser Glu Lys Lys Thr Gln Leu Ser Lys Thr Glu Ser
 1 5 10 15
 Val Lys Glu Ser Glu Ser Leu Met Glu Phe Ala Gln Pro Glu Ile Gln
 20 25 30
 Pro Gln Glu Phe Leu Asn Arg Arg Tyr Met Thr Glu Val Asp Tyr Ser
 35 40 45
 Asn Lys Gln Gly Glu Glu Gln Pro Trp Glu Ala Asp Tyr Ala Arg Lys
 50 55 60
 Pro Asn Leu Pro Lys Arg Trp Asp Met Leu Thr Glu Pro Asp Gly Gln
 65 70 75 80
 Glu Lys Lys Gln Glu Ser Phe Lys Ser Trp Glu Ala Ser Gly Lys His
 85 90 95
 Gln Glu Val Ser Lys Pro Ala Val Ser Leu Glu Gln Arg Lys Gln Asp
 100 105 110
 Thr Ser Lys Leu Arg Ser Thr Leu Pro Glu Glu Gln Lys Lys Gln Glu
 115 120 125
 Ile Ser Lys Ser Lys Pro Ser Pro Ser Gln Trp Lys Gln Asp Thr Pro
 130 135 140
 Lys Ser Lys Ala Gly Tyr Val Gln Glu Glu Gln Lys Lys Gln Glu Thr
 145 150 155 160
 Pro Lys Leu Trp Pro Val Gln Leu Gln Lys Glu Gln Asp Pro Lys Lys
 165 170 175
 Gln Thr Pro Lys Ser Trp Thr Pro Ser Met Gln Ser Glu Gln Asn Thr
 180 185 190
 Thr Lys Ser Trp Thr Thr Pro Met Cys Glu Glu Gln Asp Ser Lys Gln
 195 200 205
 Pro Glu Thr Pro Lys Ser Trp Glu Asn Asn Val Glu Ser Gln Lys His
 210 215 220
 Ser Leu Thr Ser Gln Ser Gln Ile Ser Pro Lys Ser Trp Gly Val Ala
 225 230 235 240
 Thr Ala Ser Leu Ile Pro Asn Asp Gln Leu Leu Pro Arg Lys Leu Asn
 245 250 255
 Thr Glu Pro Lys Asp Val Pro Lys Pro Val His Gln Pro Val Gly Ser
 260 265 270
 Ser Ser Thr Leu Pro Lys Asp Pro Val Leu Arg Lys Glu Lys Leu Gln
 275 280 285
 Asp Leu Met Thr Gln Ile Gln Gly Thr Cys Asn Phe Met Gln Glu Ser
 290 295 300
 Val Leu Asp Phe Asp Lys Pro Ser Ser Ala Ile Pro Thr Ser Gln Pro
 305 310 315 320
 Pro Ser Ala Thr Pro Gly Ser Pro Val Ala Ser Lys Glu Gln Asn Leu
 325 330 335
 Ser Ser Gln Ser Asp Phe Leu Gln Glu Pro Leu Gln Val Phe Asn Val
 340 345 350
 Asn Ala Pro Leu Pro Pro Arg Lys Glu Gln Glu Ile Lys Glu Ser Pro
 355 360 365

Tyr Ser Pro Gly Tyr Asn Gln Ser Phe Thr Thr Ala Ser Thr Gln Thr
 370 375 380
 Pro Pro Gln Cys Gln Leu Pro Ser Ile His Val Glu Gln Thr Val His
 385 390 395 400
 Ser Gln Glu Thr Ala Ala Asn Tyr His Pro Asp Gly Thr Ile Gln Val
 405 410 415
 Ser Asn Gly Ser Leu Ala Phe Tyr Pro Ala Gln Thr Asn Val Phe Pro
 420 425 430
 Arg Pro Thr Gln Pro Phe Val Asn Ser Arg Gly Ser Val Arg Gly Cys
 435 440 445
 Thr Arg Gly Gly Arg Leu Ile Thr Asn Ser Tyr Arg Ser Pro Gly Gly
 450 455 460
 Tyr Lys Gly Phe Asp Thr Tyr Arg Gly Leu Pro Ser Ile Ser Asn Gly
 465 470 475 480
 Asn Tyr Ser Gln Leu Gln Phe Gln Ala Arg Glu Tyr Ser Gly Ala Pro
 485 490 495
 Tyr Ser Gln Arg Asp Asn Phe Gln Gln Cys Tyr Lys Arg Gly Gly Thr
 500 505 510
 Ser Gly Gly Pro Arg Ala Asn Ser Arg Ala Gly Trp Ser Asp Ser Ser
 515 520 525
 Gln Val Ser Ser Pro Glu Arg Asp Asn Glu Thr Phe Asn Ser Gly Asp
 530 535 540
 Ser Gly Gln Gly Asp Ser Arg Ser Met Thr Pro Val Asp Val Pro Val
 545 550 555 560
 Thr Asn Pro Ala Ala Thr Ile Leu Pro Val His Val Tyr Pro Leu Pro
 565 570 575
 Gln Gln Met Arg Val Ala Phe Ser Ala Ala Arg Thr Ser Asn Leu Ala
 580 585 590
 Pro Gly Thr Leu Asp Gln Pro Tyr Gly Val Asp Leu Leu Asn Asn
 595 600 605
 Leu Gly Glu Thr Phe Asp Leu Gln Leu Gly Arg Phe Asn Cys Pro Val
 610 615 620
 Asn Gly Thr Tyr Val Phe Ile Phe His Met Leu Lys Leu Ala Val Asn
 625 630 635 640
 Val Pro Leu Tyr Val Asn Leu Met Lys Asn Glu Glu Val Leu Val Ser
 645 650 655
 Ala Tyr Ala Asn Asp Gly Ala Pro Asp His Glu Thr Ala Ser Asn His
 660 665 670
 Ala Ile Leu Gln Leu Phe Gln Gly Asp Gln Ile Trp Leu Arg Leu His
 675 680 685
 Arg Gly Ala Ile Tyr Gly Ser Ser Trp Lys Tyr Ser Thr Phe Ser Gly
 690 695 700
 Tyr Leu Leu Tyr Gln Asp *
 705 710

<210> 998
 <211> 457
 <212> PRT
 <213> Homo sapiens

<400> 998
 Met Glu Ala Ser Trp Gly Ser Phe Asn Ala Glu Arg Gly Trp Tyr Val
 1 5 10 15
 Ser Val Gln Gln Pro Glu Glu Ala Glu Ala Glu Glu Leu Ser Pro Leu
 20 25 30
 Leu Ser Asn Glu Leu His Arg Gln Arg Ser Pro Gly Val Ser Phe Gly
 35 40 45
 Leu Ser Val Phe Asn Leu Met Asn Ala Ile Met Gly Ser Gly Ile Leu
 50 55 60
 Gly Leu Ala Tyr Val Met Ala Asn Thr Gly Val Phe Gly Phe Ser Phe
 65 70 75 80

```

Leu Leu Leu Thr Val Ala Leu Leu Ala Ser Tyr Ser Val His Leu Leu
      85                      90                      95
Leu Ser Met Cys Ile Gln Thr Ala Val Thr Ser Tyr Glu Asp Leu Gly
      100                    105                    110
Leu Phe Ala Phe Gly Leu Pro Gly Lys Leu Val Val Ala Gly Thr Ile
      115                    120                    125
Ile Ile Gln Asn Ile Gly Ala Met Ser Ser Tyr Leu Leu Ile Ile Lys
      130                    135                    140
Thr Glu Leu Pro Ala Ala Ile Ala Glu Phe Leu Thr Gly Asp Tyr Ser
      145                    150                    155                    160
Arg Tyr Trp Tyr Leu Asp Gly Gln Thr Leu Leu Ile Ile Ile Cys Val
      165                    170                    175
Gly Ile Val Phe Pro Leu Ala Leu Leu Pro Lys Ile Gly Phe Leu Gly
      180                    185                    190
Tyr Thr Ser Ser Leu Ser Phe Phe Met Met Phe Phe Ala Leu Val
      195                    200                    205
Val Ile Ile Lys Lys Trp Ser Ile Pro Cys Pro Leu Thr Leu Asn Tyr
      210                    215                    220
Val Glu Lys Gly Phe Gln Ile Ser Asn Val Thr Asp Asp Cys Lys Pro
      225                    230                    235                    240
Lys Leu Phe His Phe Ser Lys Glu Ser Ala Tyr Ala Leu Pro Thr Met
      245                    250                    255
Ala Phe Ser Phe Leu Cys His Thr Ser Ile Leu Pro Ile Tyr Cys Glu
      260                    265                    270
Leu Gln Ser Pro Ser Lys Lys Arg Met Gln Asn Val Thr Asn Thr Ala
      275                    280                    285
Ile Ala Leu Ser Phe Leu Ile Tyr Phe Ile Ser Ala Leu Phe Gly Tyr
      290                    295                    300
Leu Thr Phe Tyr Asp Lys Val Glu Ser Glu Leu Leu Lys Gly Tyr Ser
      305                    310                    315                    320
Lys Tyr Leu Ser His Asp Val Val Val Met Thr Val Lys Leu Cys Ile
      325                    330                    335
Leu Phe Gly Val Leu Leu Thr Val Pro Leu Ile His Phe Pro Ala Arg
      340                    345                    350
Lys Ala Val Thr Met Met Phe Phe Ser Asn Phe Pro Phe Ser Trp Ile
      355                    360                    365
Arg His Phe Leu Ile Thr Leu Ala Leu Asn Ile Ile Ile Val Leu Leu
      370                    375                    380
Ala Ile Tyr Val Pro Asp Ile Arg Asn Val Phe Gly Val Val Gly Ala
      385                    390                    395                    400
Ser Thr Ser Thr Cys Leu Ile Phe Ile Phe Pro Gly Leu Phe Tyr Leu
      405                    410                    415
Lys Leu Ser Arg Glu Asp Phe Leu Ser Trp Lys Lys Leu Gly Ala Phe
      420                    425                    430
Val Leu Leu Ile Phe Gly Ile Leu Val Gly Asn Phe Ser Leu Ala Leu
      435                    440                    445
Ile Ile Phe Asp Trp Ile Asn Lys *
      450                    455 456

```

<210> 999
 <211> 1002
 <212> PRT
 <213> Homo sapiens

<400> 999
 Met Glu Ala Ala His Ala Lys Thr Thr Glu Glu Cys Leu Ala Tyr Phe
 1 5 10 15
 Gly Val Ser Glu Thr Thr Gly Leu Thr Pro Asp Gln Val Lys Arg Asn
 20 25 30
 Leu Glu Lys Tyr Gly Leu Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45

Leu	Trp	Glu	Leu	Val	Ile	Glu	Gln	Phe	Glu	Asp	Leu	Leu	Val	Arg	Ile
50						55					60				
Leu	Leu	Leu	Ala	Ala	Cys	Ile	Ser	Phe	Val	Leu	Ala	Trp	Phe	Glu	Glu
65					70					75					80
Gly	Glu	Glu	Thr	Ile	Thr	Ala	Phe	Val	Glu	Pro	Phe	Val	Ile	Leu	Leu
				85					90					95	
Ile	Leu	Ile	Ala	Asn	Ala	Ile	Val	Gly	Val	Trp	Gln	Glu	Arg	Asn	Ala
			100					105					110		
Glu	Asn	Ala	Ile	Glu	Ala	Leu	Lys	Glu	Tyr	Glu	Pro	Glu	Met	Gly	Lys
	115						120					125			
Val	Tyr	Arg	Ala	Asp	Arg	Lys	Ser	Val	Gln	Arg	Ile	Lys	Ala	Arg	Asp
130						135					140				
Ile	Val	Pro	Gly	Asp	Ile	Val	Glu	Val	Ala	Val	Gly	Asp	Lys	Val	Pro
145					150					155					160
Ala	Asp	Ile	Arg	Ile	Leu	Ala	Ile	Lys	Ser	Thr	Thr	Leu	Arg	Val	Asp
				165				170						175	
Gln	Ser	Ile	Leu	Thr	Gly	Glu	Ser	Val	Ser	Val	Ile	Lys	His	Thr	Glu
			180					185					190		
Pro	Val	Pro	Asp	Pro	Arg	Ala	Val	Asn	Gln	Asp	Lys	Lys	Asn	Met	Leu
	195						200					205			
Phe	Ser	Gly	Thr	Asn	Ile	Ala	Ala	Gly	Lys	Ala	Leu	Gly	Ile	Val	Ala
210					215						220				
Thr	Thr	Gly	Val	Gly	Thr	Glu	Ile	Gly	Lys	Ile	Arg	Asp	Gln	Met	Ala
225					230					235					240
Ala	Thr	Glu	Gln	Asp	Lys	Thr	Pro	Leu	Gln	Gln	Lys	Leu	Asp	Glu	Phe
				245				250						255	
Gly	Glu	Gln	Leu	Ser	Lys	Val	Ile	Ser	Leu	Ile	Cys	Val	Ala	Val	Trp
			260					265					270		
Leu	Ile	Asn	Ile	Gly	His	Phe	Asn	Asp	Pro	Val	His	Gly	Gly	Ser	Trp
	275						280					285			
Phe	Arg	Gly	Ala	Ile	Tyr	Tyr	Phe	Lys	Ile	Ala	Val	Ala	Leu	Ala	Val
290					295					300					
Ala	Ala	Ile	Pro	Glu	Gly	Leu	Pro	Ala	Val	Ile	Thr	Thr	Cys	Leu	Ala
305					310					315					320
Leu	Gly	Thr	Arg	Arg	Met	Ala	Lys	Lys	Asn	Ala	Ile	Val	Arg	Ser	Leu
				325				330						335	
Pro	Ser	Val	Glu	Thr	Leu	Gly	Cys	Thr	Ser	Val	Ile	Cys	Ser	Asp	Lys
			340					345					350		
Thr	Gly	Thr	Leu	Thr	Thr	Asn	Gln	Met	Ser	Val	Cys	Lys	Met	Phe	Ile
	355					360						365			
Ile	Asp	Lys	Val	Asp	Gly	Asp	Ile	Cys	Leu	Leu	Asn	Glu	Phe	Ser	Ile
370					375						380				
Thr	Gly	Ser	Thr	Tyr	Ala	Pro	Glu	Gly	Glu	Val	Leu	Lys	Asn	Asp	Lys
385					390					395					400
Pro	Val	Arg	Pro	Gly	Gln	Tyr	Asp	Gly	Leu	Val	Glu	Leu	Ala	Thr	Ile
				405				410						415	
Cys	Ala	Leu	Cys	Asn	Asp	Ser	Ser	Leu	Asp	Phe	Asn	Glu	Ala	Lys	Gly
			420					425					430		
Val	Tyr	Glu	Lys	Val	Gly	Glu	Ala	Thr	Glu	Thr	Ala	Leu	Thr	Thr	Leu
	435						440					445			
Val	Glu	Lys	Met	Asn	Val	Phe	Asn	Thr	Asp	Val	Arg	Ser	Leu	Ser	Lys
450						455				460					
Val	Glu	Arg	Ala	Asn	Ala	Cys	Asn	Ser	Val	Ile	Arg	Gln	Leu	Met	Lys
465					470					475					480
Lys	Glu	Phe	Thr	Leu	Glu	Phe	Ser	Arg	Asp	Arg	Lys	Ser	Met	Ser	Val
				485					490					495	
Tyr	Cys	Ser	Pro	Ala	Lys	Ser	Ser	Arg	Ala	Ala	Val	Gly	Asn	Lys	Met
			500					505					510		
Phe	Val	Lys	Gly	Ala	Pro	Glu	Gly	Val	Ile	Asp	Arg	Cys	Asn	Tyr	Val
	515						520					525			
Arg	Val	Gly	Thr	Thr	Arg	Val	Pro	Leu	Thr	Gly	Pro	Val	Lys	Glu	Lys
530						535					540				
Ile	Met	Ala	Val	Ile	Lys	Glu	Trp	Gly	Thr	Gly	Arg	Asp	Thr	Leu	Arg
545					550					555					560

```
<210> 1000
<211> 1053
<212> PRT
<213> Homo sapiens
```


<400> 1000

Met	Ile	Arg	Thr	Leu	Leu	Leu	Ser	Thr	Leu	Val	Ala	Gly	Ala	Leu	Ser	1	5	10	15
Cys	Gly	Val	Ser	Thr	Tyr	Ala	Pro	Asp	Met	Ser	Arg	Met	Leu	Gly	Gly	20	25	30	
Glu	Glu	Ala	Arg	Pro	Asn	Ser	Trp	Pro	Trp	Gln	Val	Ser	Leu	Gln	Tyr	35	40	45	
Ser	Ser	Asn	Gly	Gln	Trp	Tyr	His	Thr	Cys	Gly	Gly	Ser	Leu	Ile	Ala	50	55	60	
Asn	Ser	Trp	Val	Leu	Thr	Ala	Ala	His	Cys	Ile	Ser	Ser	Ser	Arg	Ile	65	70	75	
Tyr	Arg	Val	Met	Leu	Gly	Gln	His	Asn	Leu	Tyr	Val	Ala	Glu	Ser	Gly	85	90	95	
Ser	Leu	Ala	Val	Ser	Val	Ser	Lys	Ile	Val	Val	His	Lys	Asp	Trp	Asn	100	105	110	
Ser	Asn	Gln	Val	Ser	Lys	Gly	Asn	Asp	Ile	Ala	Leu	Leu	Lys	Leu	Ala	115	120	125	
Asn	Pro	Val	Ser	Leu	Thr	Asp	Lys	Ile	Gln	Leu	Ala	Cys	Leu	Pro	Pro	130	135	140	
Ala	Gly	Thr	Ile	Leu	Pro	Asn	Asn	Tyr	Pro	Cys	Tyr	Val	Thr	Gly	Trp	145	150	155	
Gly	Arg	Leu	Gln	Thr	Asn	Gly	Ala	Leu	Pro	Asp	Asp	Leu	Lys	Gln	Gly	165	170	175	
Arg	Leu	Leu	Val	Val	Asp	Tyr	Ala	Thr	Cys	Ser	Ser	Ser	Gly	Trp	Trp	180	185	190	
Gly	Ser	Thr	Val	Lys	Thr	Asn	Met	Ile	Cys	Ala	Gly	Gly	Asp	Gly	Val	195	200	205	
Ile	Cys	Thr	Cys	Asn	Gly	Asp	Ser	Gly	Gly	Pro	Leu	Asn	Cys	Gln	Ala	210	215	220	
Ser	Asp	Gly	Arg	Trp	Glu	Val	His	Gly	Ile	Gly	Ser	Leu	Thr	Ser	Val	225	230	235	
Leu	Gly	Cys	Asn	Tyr	Tyr	Tyr	Lys	Pro	Ser	Ile	Phe	Thr	Arg	Val	Ser	245	250	255	
Asn	Tyr	Asn	Asp	Trp	Ile	Asn	Ser	Leu	Trp	Lys	Gly	Arg	Glu	Met	Glu	260	265	270	
Val	Arg	Lys	Leu	Ser	Ile	Ser	Trp	Gln	Phe	Leu	Ile	Val	Leu	Val	Leu	275	280	285	
Ile	Leu	Gln	Ile	Leu	Ser	Ala	Leu	Asp	Phe	Asp	Pro	Tyr	Arg	Val	Leu	290	295	300	
Gly	Val	Ser	Arg	Thr	Ala	Ser	Gln	Ala	Asp	Ile	Lys	Lys	Ala	Tyr	Lys	305	310	315	
Lys	Leu	Ala	Arg	Glu	Trp	His	Pro	Asp	Lys	Asn	Lys	Asp	Pro	Gly	Ala	325	330	335	
Glu	Asp	Lys	Phe	Ile	Gln	Ile	Ser	Lys	Ala	Tyr	Glu	Ile	Leu	Ser	Asn	340	345	350	
Glu	Glu	Lys	Arg	Ser	Asn	Tyr	Asp	Gln	Tyr	Gly	Asp	Ala	Gly	Glu	Asn	355	360	365	
Gln	Gly	Tyr	Gln	Lys	Gln	Gln	Gln	Arg	Glu	Tyr	Arg	Phe	Arg	His	370	375	380		
Phe	His	Glu	Asn	Phe	Tyr	Phe	Asp	Glu	Ser	Phe	Phe	His	Phe	Pro	Phe	385	390	395	
Asn	Ser	Glu	Arg	Arg	Asp	Ser	Ile	Asp	Glu	Lys	Tyr	Leu	Leu	His	Phe	405	410	415	
Ser	His	Tyr	Val	Asn	Glu	Val	Val	Pro	Asp	Ser	Phe	Lys	Lys	Pro	Tyr	420	425	430	
Leu	Ile	Lys	Ile	Thr	Ser	Asp	Trp	Cys	Phe	Ser	Cys	Ile	His	Ile	Glu	435	440	445	
Pro	Val	Trp	Lys	Glu	Val	Ile	Gln	Glu	Leu	Glu	Glu	Leu	Gly	Val	Gly	450	455	460	
Ile	Gly	Val	Val	His	Ala	Gly	Tyr	Glu	Arg	Arg	Leu	Ala	His	His	Leu	465	470	475	
Gly	Ala	His	Ser	Thr	Pro	Ser	Ile	Leu	Gly	Ile	Ile	Asn	Gly	Lys	Ile	485	490	495	

Ser	Phe	Phe	His	Asn	Ala	Val	Val	Arg	Glu	Asn	Leu	Arg	Gln	Phe	Val
			500					505					510		
Glu	Ser	Leu	Leu	Pro	Gly	Asn	Leu	Val	Glu	Lys	Val	Thr	Asn	Lys	Asn
		515					520					525			
Tyr	Val	Arg	Phe	Leu	Ser	Gly	Trp	Gln	Gln	Glu	Asn	Lys	Pro	His	Val
	530					535					540				
Leu	Leu	Phe	Asp	Gln	Thr	Pro	Ile	Val	Pro	Leu	Leu	Tyr	Lys	Leu	Thr
545					550					555					560
Ala	Phe	Ala	Tyr	Lys	Asp	Tyr	Leu	Ser	Phe	Gly	Tyr	Val	Tyr	Val	Gly
			565						570					575	
Leu	Arg	Gly	Thr	Glu	Glu	Met	Thr	Arg	Arg	Tyr	Asn	Ile	Asn	Ile	Tyr
			580					585					590		
Ala	Pro	Thr	Leu	Leu	Val	Phe	Lys	Glu	His	Ile	Asn	Arg	Pro	Ala	Asp
		595					600					605			
Val	Ile	Gln	Ala	Arg	Gly	Met	Lys	Lys	Gln	Ile	Ile	Asp	Asp	Phe	Ile
	610					615					620				
Thr	Arg	Asn	Lys	Tyr	Leu	Leu	Ala	Ala	Arg	Leu	Thr	Ser	Gln	Lys	Leu
625					630					635					640
Phe	His	Glu	Leu	Cys	Pro	Val	Lys	Arg	Ser	His	Arg	Gln	Arg	Lys	Tyr
			645					650						655	
Cys	Val	Val	Leu	Leu	Thr	Ala	Glu	Thr	Thr	Lys	Leu	Ser	Lys	Pro	Phe
			660					665					670		
Glu	Ala	Phe	Leu	Ser	Phe	Ala	Leu	Ala	Asn	Thr	Gln	Asp	Thr	Val	Arg
		675				680						685			
Phe	Val	His	Val	Tyr	Ser	Asn	Arg	Gln	Gln	Glu	Phe	Ala	Asp	Thr	Leu
	690					695					700				
Leu	Pro	Asp	Ser	Glu	Ala	Phe	Gln	Gly	Lys	Ser	Ala	Val	Ser	Ile	Leu
705					710					715					720
Glu	Arg	Arg	Asn	Thr	Ala	Gly	Arg	Val	Val	Tyr	Lys	Thr	Leu	Glu	Asp
			725					730						735	
Pro	Trp	Ile	Gly	Ser	Glu	Ser	Asp	Lys	Phe	Ile	Leu	Leu	Gly	Tyr	Leu
			740					745					750		
Asp	Gln	Leu	Arg	Lys	Asp	Pro	Ala	Leu	Leu	Ser	Ser	Glu	Ala	Val	Leu
		755				760						765			
Pro	Asp	Leu	Thr	Asp	Glu	Leu	Ala	Pro	Val	Phe	Leu	Leu	Arg	Trp	Phe
	770					775					780				
Tyr	Ser	Ala	Ser	Asp	Tyr	Ile	Ser	Asp	Cys	Trp	Asp	Ser	Ile	Phe	His
785					790					795					800
Asn	Asn	Trp	Arg	Glu	Met	Met	Pro	Leu	Leu	Ser	Leu	Ile	Phe	Ser	Ala
			805					810						815	
Leu	Phe	Ile	Leu	Phe	Gly	Thr	Val	Ile	Val	Gln	Ala	Phe	Ser	Asp	Ser
			820					825					830		
Asn	Asp	Glu	Arg	Glu	Ser	Ser	Pro	Glu	Lys	Glu	Glu	Ala	Gln	Glu	
		835					840					845			
Lys	Thr	Gly	Lys	Thr	Glu	Pro	Ser	Phe	Thr	Lys	Glu	Asn	Ser	Ser	Lys
	850					855					860				
Ile	Pro	Lys	Lys	Gly	Phe	Val	Glu	Val	Thr	Glu	Leu	Thr	Asp	Val	Thr
865					870					875					880
Tyr	Thr	Ser	Asn	Leu	Val	Arg	Leu	Arg	Pro	Gly	His	Met	Asn	Val	Val
			885					890						895	
Leu	Ile	Leu	Ser	Asn	Ser	Thr	Lys	Thr	Ser	Leu	Leu	Gln	Lys	Phe	Ala
			900					905					910		
Leu	Glu	Val	Tyr	Thr	Phe	Thr	Gly	Ser	Ser	Cys	Leu	His	Phe	Ser	Phe
		915					920					925			
Leu	Ser	Leu	Asp	Lys	His	Arg	Glu	Trp	Leu	Glu	Tyr	Leu	Leu	Glu	Phe
	930					935					940				
Ala	Gln	Asp	Ala	Ala	Pro	Ile	Pro	Asn	Gln	Tyr	Asp	Lys	His	Phe	Met
945					950					955					960
Glu	Arg	Asp	Tyr	Thr	Gly	Tyr	Val	Leu	Ala	Leu	Asn	Gly	His	Lys	Lys
			965					970						975	
Tyr	Phe	Cys	Leu	Phe	Lys	Pro	Gln	Lys	Thr	Val	Glu	Glu	Glu	Glu	Ala
			980					985					990		
Ile	Gly	Ser	Cys	Ser	Asp	Val	Asp	Ser	Ser	Leu	Tyr	Leu	Gly	Glu	Ser
		995				1000						1005			

Arg Gly Lys Pro Ser Cys Gly Leu Gly Ser Arg Pro Ile Lys Gly Lys
 1010 1015 1020
 Leu Ser Lys Leu Ser Leu Trp Met Glu Arg Leu Leu Glu Gly Ser Leu
 1025 1030 1035 1040
 Gln Arg Phe Tyr Ile Pro Ser Trp Pro Glu Leu Asp *
 1045 1050 1052

<210> 1001
 <211> 339
 <212> PRT
 <213> Homo sapiens

<400> 1001
 Met Trp Leu Lys Val Phe Thr Thr Phe Leu Ser Phe Ala Thr Gly Ala
 1 5 10 15
 Cys Ser Gly Leu Lys Val Thr Val Pro Ser His Thr Val His Gly Val
 20 25 30
 Arg Gly Gln Ala Leu Tyr Leu Pro Val His Tyr Gly Phe His Thr Pro
 35 40 45
 Ala Ser Asp Ile Gln Ile Ile Trp Leu Phe Glu Arg Pro His Thr Met
 50 55 60
 Pro Lys Tyr Leu Leu Gly Ser Val Asn Lys Ser Val Val Pro Asp Leu
 65 70 75 80
 Glu Tyr Gln His Lys Phe Thr Met Met Pro Pro Asn Ala Ser Leu Leu
 85 90 95
 Ile Asn Pro Leu Gln Phe Pro Asp Glu Gly Asn Tyr Ile Val Lys Val
 100 105 110
 Asn Ile Gln Gly Asn Gly Thr Leu Ser Ala Ser Gln Lys Ile Gln Val
 115 120 125
 Thr Val Asp Asp Pro Val Thr Lys Pro Val Val Gln Ile His Pro Pro
 130 135 140
 Ser Gly Ala Val Glu Tyr Val Gly Asn Met Thr Leu Thr Cys His Val
 145 150 155 160
 Glu Gly Gly Thr Arg Leu Ala Tyr Gln Trp Leu Lys Asn Gly Arg Pro
 165 170 175
 Val His Thr Ser Ser Thr Tyr Ser Phe Ser Pro Gln Asn Asn Thr Leu
 180 185 190
 His Ile Ala Pro Val Thr Lys Glu Asp Ile Gly Asn Tyr Ser Cys Leu
 195 200 205
 Val Arg Asn Pro Val Ser Glu Met Glu Ser Asp Ile Ile Met Pro Ile
 210 215 220
 Ile Tyr Tyr Gly Pro Tyr Gly Leu Gln Val Asn Ser Asp Lys Gly Leu
 225 230 235 240
 Lys Val Gly Glu Val Phe Thr Val Asp Leu Gly Glu Ala Ile Leu Phe
 245 250 255
 Asp Cys Ser Ala Asp Ser His Pro Pro Asn Thr Tyr Ser Trp Ile Arg
 260 265 270
 Arg Thr Asp Asn Thr Thr Tyr Ile Ile Lys His Gly Pro Arg Leu Glu
 275 280 285
 Val Ala Ser Glu Lys Val Ala Gln Lys Thr Met Asp Tyr Val Cys Cys
 290 295 300
 Ala Tyr Asn Asn Ile Thr Gly Arg Gln Asp Glu Thr His Phe Thr Val
 305 310 315 320
 Ile Ile Thr Ser Val Gly Met Cys Asp Ile Gln Gly Arg Asp Pro Asn
 325 330 335
 Lys Thr *
 338

<210> 1002

<211> 266
 <212> PRT
 <213> Homo sapiens

<400> 1002
 Met Ser Glu Glu Val Thr Tyr Ala Asp Leu Gln Phe Gln Asn Ser Ser
 1 5 10 15
 Glu Met Glu Lys Ile Pro Glu Ile Gly Lys Phe Gly Glu Lys Ala Pro
 20 25 30
 Pro Ala Pro Ser His Val Trp Arg Pro Ala Ala Leu Phe Leu Thr Leu
 35 40 45
 Leu Cys Leu Leu Leu Leu Ile Gly Leu Gly Val Leu Ala Ser Met Phe
 50 55 60
 His Val Thr Leu Lys Ile Glu Met Lys Lys Met Asn Lys Leu Gln Asn
 65 70 75 80
 Ile Ser Glu Glu Leu Gln Arg Asn Ile Ser Leu Gln Leu Met Ser Asn
 85 90 95
 Met Asn Ile Ser Asn Lys Ile Arg Asn Leu Ser Thr Thr Leu Gln Thr
 100 105 110
 Ile Ala Thr Lys Leu Cys Arg Glu Leu Tyr Ser Lys Glu Gln Glu His
 115 120 125
 Lys Cys Lys Pro Cys Pro Arg Arg Trp Ile Trp His Lys Asp Ser Cys
 130 135 140
 Tyr Phe Leu Ser Asp Asp Val Gln Thr Trp Gln Glu Ser Lys Met Ala
 145 150 155 160
 Cys Ala Ala Gln Asn Ala Ser Leu Leu Lys Ile Asn Asn Lys Asn Ala
 165 170 175
 Leu Glu Phe Ile Lys Ser Gln Ser Arg Ser Tyr Asp Tyr Trp Leu Gly
 180 185 190
 Leu Ser Pro Glu Glu Asp Ser Thr Arg Gly Met Arg Val Asp Asn Ile
 195 200 205
 Ile Asn Ser Ser Ala Trp Val Ile Arg Asn Ala Pro Asp Leu Asn Asn
 210 215 220
 Met Tyr Cys Gly Tyr Ile Asn Arg Leu Tyr Val Gln Tyr Tyr His Cys
 225 230 235 240
 Thr Tyr Lys Gln Arg Met Ile Cys Glu Lys Met Ala Asn Pro Val Gln
 245 250 255
 Leu Gly Ser Thr Tyr Phe Arg Glu Ala *
 260 265

<210> 1003
 <211> 254
 <212> PRT
 <213> Homo sapiens

<400> 1003
 Met Tyr Gln Val Pro Leu Pro Leu Asp Arg Asp Gly Thr Leu Val Arg
 1 5 10 15
 Leu Arg Phe Thr Met Val Ala Leu Val Thr Val Cys Cys Pro Leu Val
 20 25 30
 Ala Phe Leu Phe Cys Ile Leu Trp Ser Leu Leu Phe His Phe Lys Glu
 35 40 45
 Thr Thr Ala Thr His Cys Gly Val Pro Asn Tyr Leu Pro Ser Val Ser
 50 55 60
 Ser Ala Ile Gly Gly Glu Val Pro Gln Arg Tyr Val Trp Arg Phe Cys
 65 70 75 80
 Ile Gly Leu His Ser Ala Pro Arg Phe Leu Val Ala Phe Ala Tyr Trp
 85 90 95
 Asn His Tyr Leu Ser Cys Thr Ser Pro Cys Ser Cys Tyr Arg Pro Leu
 100 105 110

Cys Arg Leu Asn Phe Gly Leu Asn Val Val Glu Asn Leu Ala Leu Leu
 115 120 125
 Val Leu Thr Tyr Val Ser Ser Ser Glu Asp Phe Thr Ile His Glu Asn
 130 135 140
 Ala Phe Ile Val Phe Ile Ala Ser Ser Leu Gly His Met Leu Leu Thr
 145 150 155 160
 Cys Ile Leu Trp Arg Leu Thr Lys Lys His Thr Val Ser Gln Glu Asp
 165 170 175
 Arg Lys Ser Tyr Ser Trp Lys Gln Arg Leu Phe Ile Ile Asn Phe Ile
 180 185 190
 Ser Phe Phe Ser Ala Leu Ala Val Tyr Phe Arg His Asn Met Tyr Cys
 195 200 205
 Glu Ala Gly Val Tyr Thr Ile Phe Ala Ile Leu Glu Tyr Thr Val Val
 210 215 220
 Leu Thr Asn Met Ala Phe His Met Thr Ala Trp Trp Asp Phe Gly Asn
 225 230 235 240
 Lys Glu Leu Leu Ile Thr Ser Gln Pro Glu Glu Lys Arg Phe
 245 250 254

<210> 1004
 <211> 468
 <212> PRT
 <213> Homo sapiens

<400> 1004
 Met Arg Pro Gln Glu Leu Pro Arg Leu Ala Phe Pro Leu Leu Leu Leu
 1 5 10 15
 Leu Leu Leu Leu Leu Pro Pro Pro Pro Cys Pro Ala His Ser Ala Thr
 20 25 30
 Arg Phe Asp Pro Thr Trp Glu Ser Leu Asp Ala Arg Gln Leu Pro Ala
 35 40 45
 Trp Phe Asp Gln Ala Lys Phe Gly Ile Phe Ile His Trp Gly Val Phe
 50 55 60
 Ser Val Pro Ser Phe Gly Ser Glu Trp Phe Trp Trp Tyr Trp Gln Lys
 65 70 75 80
 Glu Lys Ile Pro Lys Tyr Val Glu Phe Met Lys Asp Asn Tyr Pro Pro
 85 90 95
 Ser Phe Lys Tyr Glu Asp Phe Gly Pro Leu Phe Thr Ala Lys Phe Phe
 100 105 110
 Asn Ala Asn Gln Trp Ala Asp Ile Phe Gln Ala Ser Gly Ala Lys Tyr
 115 120 125
 Ile Val Leu Thr Ser Lys His His Glu Gly Phe Thr Leu Trp Gly Ser
 130 135 140
 Glu Tyr Ser Trp Asn Trp Asn Ala Ile Asp Glu Gly Pro Lys Arg Asp
 145 150 155 160
 Ile Val Lys Glu Leu Glu Val Ala Ile Arg Asn Arg Thr Asp Leu Arg
 165 170 175
 Phe Gly Leu Tyr Tyr Ser Leu Phe Glu Trp Phe His Pro Leu Phe Leu
 180 185 190
 Glu Asp Glu Ser Ser Ser Phe His Lys Arg Gln Phe Pro Val Ser Lys
 195 200 205
 Thr Leu Pro Glu Leu Tyr Glu Leu Val Asn Asn Tyr Gln Pro Glu Val
 210 215 220
 Leu Trp Ser Asp Gly Asp Gly Gly Glu Pro Asp Gln Tyr Trp Asn Ser
 225 230 235 240
 Thr Gly Phe Leu Ala Trp Leu Tyr Asn Glu Ser Pro Val Arg Gly Thr
 245 250 255
 Val Val Thr Asn Asp Arg Trp Gly Ala Gly Ser Ile Cys Lys His Gly
 260 265 270
 Gly Phe Tyr Thr Cys Ser Asp Arg Tyr Asn Pro Gly His Leu Leu Pro
 275 280 285

```

His Lys Trp Glu Asn Cys Met Thr Ile Asp Lys Leu Ser Trp Gly Tyr
 290                295                300
Arg Arg Glu Ala Gly Ile Ser Asp Tyr Leu Thr Ile Glu Glu Leu Val
 305                310                315                320
Lys Gln Leu Val Glu Thr Val Ser Cys Gly Gly Asn Leu Leu Met Asn
                325                330                335
Ile Gly Pro Thr Leu Asp Gly Thr Ile Ser Val Val Phe Glu Glu Arg
                340                345                350
Leu Arg Gln Met Gly Ser Trp Leu Lys Val Asn Gly Glu Ala Ile Tyr
                355                360                365
Glu Thr His Thr Trp Arg Ser Gln Asn Asp Thr Val Thr Pro Asp Val
 370                375                380
Trp Tyr Thr Ser Lys Pro Lys Glu Lys Leu Val Tyr Ala Ile Phe Leu
 385                390                395                400
Lys Trp Pro Thr Ser Gly Gln Leu Phe Leu Gly His Pro Lys Ala Ile
                405                410                415
Leu Gly Ala Thr Glu Val Lys Leu Leu Gly His Gly Gln Pro Leu Asn
                420                425                430
Trp Ile Ser Leu Glu Gln Asn Gly Ile Met Val Glu Leu Pro Gln Leu
                435                440                445
Thr Ile His Gln Met Pro Cys Lys Trp Gly Trp Ala Leu Ala Leu Thr
 450                455                460
Asn Val Ile *
 465                467

```

```

<210> 1005
<211> 362
<212> PRT
<213> Homo sapiens

```

```

<400> 1005
Met Glu Thr Gly Ala Ala Glu Leu Tyr Asp Gln Ala Leu Leu Gly Ile
 1                5                10                15
Leu Gln His Val Gly Asn Val Gln Asp Phe Leu Arg Val Leu Phe Gly
                20                25                30
Phe Leu Tyr Arg Lys Thr Asp Phe Tyr Arg Leu Leu Arg His Pro Ser
                35                40                45
Asp Arg Met Gly Phe Pro Pro Gly Ala Ala Gln Ala Leu Val Leu Gln
 50                55                60
Val Phe Lys Thr Phe Asp His Met Ala Arg Gln Asp Asp Glu Lys Arg
 65                70                75                80
Arg Gln Glu Leu Glu Glu Lys Ile Arg Arg Lys Glu Glu Glu Glu Ala
                85                90                95
Lys Thr Val Ser Ala Ala Ala Ala Glu Lys Glu Pro Val Pro Val Pro
                100                105                110
Val Gln Glu Ile Glu Ile Asp Ser Thr Thr Glu Leu Asp Gly His Gln
                115                120                125
Glu Val Glu Lys Val Gln Pro Pro Gly Pro Val Lys Glu Met Ala His
 130                135                140
Gly Ser Gln Glu Ala Glu Ala Pro Gly Ala Val Ala Gly Ala Ala Glu
 145                150                155                160
Val Pro Arg Glu Pro Pro Ile Leu Pro Arg Ile Gln Glu Gln Phe Gln
                165                170                175
Lys Asn Pro Asp Ser Tyr Asn Gly Ala Val Arg Glu Asn Tyr Thr Trp
                180                185                190
Ser Gln Asp Tyr Thr Asp Leu Glu Val Arg Val Pro Val Pro Lys His
                195                200                205
Val Val Lys Gly Lys Gln Val Ser Val Ala Leu Ser Ser Ser Ser Ile
 210                215                220
Arg Val Ala Met Leu Glu Asn Gly Glu Arg Val Leu Met Glu Gly
 225                230                235                240

```

```
<210> 1006
<211> 507
<212> PRT
<213> Homo sapiens
```

2748

Glu Ala Ser Thr Val Gln Glu Glu Glu Gln Asp Arg Lys Gly Ser His
 305 310 315 320
 Thr Asp Leu Glu Ser Ile Asn Glu Asn Leu Val Glu Ser Ala Leu Arg
 325 330 335
 Arg Val Asn Arg Glu Glu Lys Gly Asn Lys Ser Val His Leu Arg Lys
 340 345 350
 Ala Ser Ser Pro Asn Leu His Arg Arg Gln Trp Glu Lys Asn Val Pro
 355 360 365
 Asn Thr Ala Leu Thr Ala Leu Glu Asn Ala Ser Ile Leu Thr Ser Ser
 370 375 380
 Leu Thr Ala Glu Asp Asp Arg Gly Gly Ser Val Ile Lys Tyr Ser Lys
 385 390 395 400
 Asn Thr Thr Arg Lys Gln Trp Leu Lys Glu Thr Pro Asp Thr Leu Leu
 405 410 415
 Asn Ile Leu Lys Asn Ala Asp Leu Ser Leu Ala Phe Gln Thr Tyr Thr
 420 425 430
 Ile Tyr Arg Pro Gly Ser Glu Gly Phe Leu Lys Gly Pro Leu Ser Glu
 435 440 445
 Glu Thr Glu Ala Ser Asp Ser Val Asp Gly Gly His Asp Ser Val Ile
 450 455 460
 Leu Asp Pro Glu Arg Leu Glu Pro Gly Leu Asp Glu Glu Asp Thr Asp
 465 470 475 480
 Phe Glu Glu Glu Asp Asp Asn Pro Asp Trp Val Ser Glu Leu Lys Lys
 485 490 495
 Arg Ala Gly Trp Gln Gly Leu Cys Asp Arg *
 500 505 506

<210> 1007

<211> 895

<212> PRT

<213> Homo sapiens

<400> 1007

Met Asn Pro Gly Phe Asp Leu Ser Arg Arg Asn Pro Gln Glu Asp Phe
 1 5 10 15
 Glu Leu Ile Gln Arg Ile Gly Ser Gly Thr Tyr Gly Asp Val Tyr Lys
 20 25 30
 Ala Arg Asn Val Asn Thr Gly Glu Leu Ala Ala Ile Lys Val Ile Lys
 35 40 45
 Leu Glu Pro Gly Glu Asp Phe Ala Val Val Gln Gln Glu Ile Ile Met
 50 55 60
 Met Lys Asp Cys Lys His Pro Asn Ile Val Ala Tyr Phe Gly Ser Tyr
 65 70 75 80
 Leu Arg Arg Asp Lys Leu Trp Ile Cys Met Glu Phe Cys Gly Gly Gly
 85 90 95
 Ser Leu Gln Asp Ile Tyr His Val Thr Gly Pro Leu Ser Glu Leu Gln
 100 105 110
 Ile Ala Tyr Val Ser Arg Glu Thr Leu Gln Gly Leu Tyr Tyr Leu His
 115 120 125
 Ser Lys Gly Lys Met His Arg Asp Ile Lys Gly Ala Asn Ile Leu Leu
 130 135 140
 Thr Asp Asn Gly His Val Lys Leu Ala Asp Phe Gly Val Ser Ala Gln
 145 150 155 160
 Ile Thr Ala Thr Ile Ala Lys Arg Lys Ser Phe Ile Gly Thr Pro Tyr
 165 170 175
 Trp Met Ala Pro Glu Val Ala Ala Val Glu Arg Lys Gly Gly Tyr Asn
 180 185 190
 Gln Leu Cys Asp Leu Trp Ala Val Gly Ile Thr Ala Ile Glu Leu Ala
 195 200 205
 Glu Leu Gln Pro Pro Met Phe Asp Leu His Pro Met Arg Ala Leu Phe
 210 215 220

Leu Met Thr Lys Ser Asn Phe Gln Pro Pro Lys Leu Lys Asp Lys Met															
225					230					235					240
Lys Trp Ser Asn Ser Phe His His Phe Val Lys Met Ala Leu Thr Lys															
				245					250						255
Asn Pro Lys Lys Arg Pro Thr Ala Glu Lys Leu Leu Gln His Pro Phe															
				260					265						270
Val Thr Gln His Leu Thr Arg Ser Leu Ala Ile Glu Leu Leu Asp Lys															
				275					280					285	
Val Asn Asn Pro Asp His Ser Thr Tyr His Asp Phe Asp Asp Asp Asp															
				290					295					300	
Pro Glu Pro Leu Val Ala Val Pro His Arg Ile His Ser Thr Ser Arg															
305					310					315					320
Asn Val Arg Glu Glu Lys Thr Arg Ser Glu Ile Thr Phe Gly Gln Val															
				325					330						335
Lys Phe Asp Pro Pro Leu Arg Lys Glu Thr Glu Pro His His Glu Leu															
				340					345					350	
Pro Asp Ser Asp Gly Phe Leu Asp Ser Ser Glu Glu Ile Tyr Tyr Thr															
				355					360					365	
Ala Arg Ser Asn Leu Asp Leu Gln Leu Glu Tyr Gly Gln Gly His Gln															
				370					375					380	
Gly Gly Tyr Phe Leu Gly Ala Asp Lys Ser Leu Leu Lys Ser Val Glu															
385					390					395					400
Glu Glu Leu His Gln Arg Gly His Val Ala His Leu Glu Asp Asp Glu															
				405					410						415
Gly Asp Asp Asp Glu Ser Lys His Ser Thr Leu Lys Ala Lys Ile Pro															
				420					425					430	
Pro Pro Leu Pro Pro Lys Pro Lys Ser Ile Phe Ile Pro Gln Glu Met															
				435					440					445	
His Ser Thr Glu Asp Glu Asn Gln Gly Thr Ile Lys Arg Cys Pro Met															
				450					455					460	
Ser Gly Ser Pro Ala Lys Pro Ser Gln Val Pro Pro Arg Pro Pro Pro															
465					470					475					480
Pro Arg Leu Pro Pro His Lys Pro Val Ala Leu Gly Asn Gly Met Ser															
				485					490						495
Ser Phe Gln Leu Asn Gly Glu Arg Asp Gly Ser Leu Cys Gln Gln Gln															
				500					505					510	
Asn Glu His Arg Gly Thr Asn Leu Ser Arg Lys Glu Lys Lys Asp Val															
				515					520					525	
Pro Lys Pro Ile Ser Asn Gly Leu Pro Pro Thr Pro Lys Val His Met															
				530					535					540	
Gly Ala Cys Phe Ser Lys Val Phe Asn Gly Cys Pro Leu Lys Ile His															
545					550					555					560
Cys Ala Ser Ser Trp Ile Asn Pro Asp Thr Arg Asp Gln Tyr Leu Ile															
				565					570						575
Phe Gly Ala Glu Glu Gly Ile Tyr Thr Leu Asn Leu Asn Glu Leu His															
				580					585					590	
Glu Thr Ser Met Glu Gln Leu Phe Pro Arg Arg Cys Thr Trp Leu Tyr															
				595					600					605	
Val Met Asn Asn Cys Leu Leu Ser Ile Ser Gly Lys Ala Ser Gln Leu															
				610					615					620	
Tyr Ser His Asn Leu Pro Gly Leu Phe Asp Tyr Ala Arg Gln Met Gln															
625					630					635					640
Lys Leu Pro Val Ala Ile Pro Ala His Lys Leu Pro Asp Arg Ile Leu															
				645					650						655
Pro Arg Lys Phe Ser Val Ser Ala Lys Ile Pro Glu Thr Lys Trp Cys															
				660					665					670	
Gln Lys Cys Cys Val Val Arg Asn Pro Tyr Thr Gly His Lys Tyr Leu															
				675					680					685	
Cys Gly Ala Leu Gln Thr Ser Ile Val Leu Leu Glu Trp Val Glu Pro															
				690					695					700	
Met Gln Lys Phe Met Leu Ile Lys His Ile Asp Phe Pro Ile Pro Cys															
705					710					715					720
Pro Leu Arg Met Phe Glu Met Leu Val Val Pro Glu Gln Glu Tyr Pro															
				725					730						735

```

Leu Val Cys Val Gly Val Ser Arg Gly Arg Asp Phe Asn Gln Val Val
      740      745      750
Arg Phe Glu Thr Val Asn Pro Asn Ser Thr Ser Ser Trp Phe Thr Glu
      755      760      765
Ser Asp Thr Pro Gln Thr Asn Val Thr His Val Thr Gln Leu Glu Arg
      770      775      780
Asp Thr Ile Leu Val Cys Leu Asp Cys Cys Ile Lys Ile Val Asn Leu
      785      790      795      800
Gln Gly Arg Leu Lys Ser Ser Arg Lys Leu Ser Ser Glu Leu Thr Phe
      805      810      815
Asp Phe Gln Ile Glu Ser Ile Val Cys Leu Gln Asp Ser Val Leu Ala
      820      825      830
Phe Trp Lys His Gly Met Gln Gly Arg Ser Phe Arg Ser Asn Glu Val
      835      840      845
Thr Gln Glu Ile Ser Asp Ser Thr Arg Ile Phe Arg Leu Leu Gly Ser
      850      855      860
Asp Arg Val Val Val Leu Glu Ser Arg Pro Thr Asp Asn Pro Thr Ala
      865      870      875      880
Asn Ser Asn Leu Tyr Ile Leu Ala Gly His Glu Asn Ser Tyr *
      885      890      894

```

```

<210> 1008
<211> 874
<212> PRT
<213> Homo sapiens

```

```

<400> 1008
Met Asn Pro Gly Phe Asp Leu Ser Arg Arg Asn Pro Gln Glu Asp Phe
  1      5      10      15
Glu Leu Ile Gln Arg Ile Gly Ser Gly Thr Tyr Gly Asp Val Tyr Lys
      20      25      30
Ala Arg Asn Val Asn Thr Gly Glu Leu Ala Ala Ile Lys Val Ile Lys
      35      40      45
Leu Glu Pro Gly Glu Asp Phe Ala Val Val Gln Gln Glu Ile Ile Met
      50      55      60
Met Lys Asp Cys Lys His Pro Asn Ile Val Ala Tyr Phe Gly Ser Tyr
      65      70      75      80
Leu Arg Arg Asp Lys Leu Trp Ile Cys Met Glu Phe Cys Gly Gly Gly
      85      90      95
Ser Leu Gln Asp Ile Tyr His Val Thr Gly Pro Leu Ser Glu Leu Gln
      100      105      110
Ile Ala Tyr Val Ser Arg Glu Thr Leu Gln Gly Leu Tyr Tyr Leu His
      115      120      125
Ser Lys Gly Lys Met His Arg Asp Ile Lys Gly Ala Asn Ile Leu Leu
      130      135      140
Thr Asp Asn Gly His Val Lys Leu Ala Asp Phe Gly Val Ser Ala Gln
      145      150      155      160
Ile Thr Ala Thr Ile Ala Lys Arg Lys Ser Phe Ile Gly Thr Pro Tyr
      165      170      175
Trp Met Ala Pro Glu Val Ala Ala Val Glu Arg Lys Gly Gly Tyr Asn
      180      185      190
Gln Leu Cys Asp Leu Trp Ala Val Gly Ile Thr Ala Ile Glu Leu Ala
      195      200      205
Glu Leu Gln Pro Pro Met Phe Asp Leu His Pro Met Arg Ala Leu Phe
      210      215      220
Leu Met Thr Lys Ser Asn Phe Gln Pro Pro Lys Leu Lys Asp Lys Met
      225      230      235      240
Lys Trp Ser Asn Ser Phe His His Phe Val Lys Met Ala Leu Thr Lys
      245      250      255
Asn Pro Lys Lys Arg Pro Thr Ala Glu Lys Leu Leu Gln His Pro Phe
      260      265      270

```

Val	Thr	Gln	His	Leu	Thr	Arg	Ser	Leu	Ala	Ile	Glu	Leu	Leu	Asp	Lys	275	280	285
Val	Asn	Asn	Pro	Asp	His	Ser	Thr	Tyr	His	Asp	Phe	Asp	Asp	Asp	Asp	290	295	300
Pro	Glu	Pro	Leu	Val	Ala	Val	Pro	His	Arg	Ile	His	Ser	Thr	Ser	Arg	305	310	315
Asn	Val	Arg	Glu	Glu	Lys	Thr	Arg	Ser	Glu	Ile	Thr	Phe	Gly	Gln	Val	325	330	335
Lys	Phe	Asp	Pro	Pro	Leu	Arg	Lys	Glu	Thr	Glu	Pro	His	His	Glu	Leu	340	345	350
Asp	Leu	Gln	Leu	Glu	Tyr	Gly	Gln	Gly	His	Gln	Gly	Gly	Tyr	Phe	Leu	355	360	365
Gly	Ala	Asn	Lys	Ser	Leu	Leu	Lys	Ser	Val	Glu	Glu	Glu	Leu	His	Gln	370	375	380
Arg	Gly	His	Val	Ala	His	Leu	Glu	Asp	Asp	Glu	Gly	Asp	Asp	Asp	Glu	385	390	395
Ser	Lys	His	Ser	Thr	Leu	Lys	Ala	Lys	Ile	Pro	Pro	Pro	Leu	Pro	Pro	405	410	415
Lys	Pro	Lys	Ser	Ile	Phe	Ile	Pro	Gln	Glu	Met	His	Ser	Thr	Glu	Asp	420	425	430
Glu	Asn	Gln	Gly	Thr	Ile	Lys	Arg	Cys	Pro	Met	Ser	Gly	Ser	Pro	Ala	435	440	445
Lys	Pro	Ser	Gln	Val	Pro	Pro	Arg	Pro	Pro	Pro	Pro	Arg	Leu	Pro	Pro	450	455	460
His	Lys	Pro	Val	Ala	Leu	Gly	Asn	Gly	Met	Ser	Ser	Phe	Gln	Leu	Asn	465	470	475
Gly	Glu	Arg	Asp	Gly	Ser	Leu	Cys	Gln	Gln	Asn	Glu	His	Arg	Gly		485	490	495
Thr	Asn	Leu	Ser	Arg	Lys	Glu	Lys	Lys	Asp	Val	Pro	Lys	Pro	Ile	Ser	500	505	510
Asn	Gly	Leu	Pro	Pro	Thr	Pro	Lys	Val	His	Met	Gly	Ala	Cys	Phe	Ser	515	520	525
Lys	Val	Phe	Asn	Gly	Cys	Pro	Leu	Lys	Ile	His	Cys	Ala	Ser	Ser	Trp	530	535	540
Ile	Asn	Pro	Asp	Thr	Arg	Asp	Gln	Tyr	Leu	Ile	Phe	Gly	Ala	Glu	Glu	545	550	555
Gly	Ile	Tyr	Thr	Leu	Asn	Leu	Asn	Glu	Leu	His	Glu	Thr	Ser	Met	Glu	565	570	575
Gln	Leu	Phe	Pro	Arg	Arg	Cys	Thr	Trp	Leu	Tyr	Val	Met	Asn	Asn	Cys	580	585	590
Leu	Leu	Ser	Ile	Ser	Gly	Lys	Ala	Ser	Gln	Leu	Tyr	Ser	His	Asn	Leu	595	600	605
Pro	Gly	Leu	Phe	Asp	Tyr	Ala	Arg	Gln	Met	Gln	Lys	Leu	Pro	Val	Ala	610	615	620
Ile	Pro	Ala	His	Lys	Leu	Pro	Asp	Arg	Ile	Leu	Pro	Arg	Lys	Phe	Ser	625	630	635
Val	Ser	Ala	Lys	Ile	Pro	Glu	Thr	Lys	Trp	Cys	Gln	Lys	Cys	Cys	Val	645	650	655
Val	Arg	Asn	Pro	Tyr	Thr	Gly	His	Lys	Tyr	Leu	Cys	Gly	Ala	Leu	Gln	660	665	670
Thr	Ser	Ile	Val	Leu	Leu	Glu	Trp	Val	Glu	Pro	Met	Gln	Lys	Phe	Met	675	680	685
Leu	Ile	Lys	His	Ile	Asp	Phe	Pro	Ile	Pro	Cys	Pro	Leu	Arg	Met	Phe	690	695	700
Glu	Met	Leu	Val	Val	Pro	Glu	Gln	Glu	Tyr	Pro	Leu	Val	Cys	Val	Gly	705	710	715
Val	Ser	Arg	Gly	Arg	Asp	Phe	Asn	Gln	Val	Val	Arg	Phe	Glu	Thr	Val	725	730	735
Asn	Pro	Asn	Ser	Thr	Ser	Ser	Trp	Phe	Thr	Glu	Ser	Asp	Thr	Pro	Gln	740	745	750
Thr	Asn	Val	Thr	His	Val	Thr	Gln	Leu	Glu	Arg	Asp	Thr	Ile	Leu	Val	755	760	765
Cys	Leu	Asp	Cys	Cys	Ile	Lys	Ile	Val	Asn	Leu	Gln	Gly	Arg	Leu	Lys	770	775	780

Ser Ser Arg Lys Leu Ser Ser Glu Leu Thr Phe Asp Phe Gln Ile Glu
 785 790 795 800
 Ser Ile Val Cys Leu Gln Asp Ser Val Leu Ala Phe Trp Lys His Gly
 805 810 815
 Met Gln Gly Arg Ser Phe Arg Ser Asn Glu Val Thr Gln Glu Ile Ser
 820 825 830
 Asp Ser Thr Arg Ile Phe Arg Leu Leu Gly Ser Asp Arg Val Val Val
 835 840 845
 Leu Glu Ser Arg Pro Thr Asp Asn Pro Thr Ala Asn Ser Asn Leu Tyr
 850 855 860
 Ile Leu Ala Gly His Glu Asn Ser Tyr *
 865 870 873

<210> 1009

<211> 441

<212> PRT

<213> Homo sapiens

<400> 1009

Met Val His Ile Lys Lys Gly Glu Leu Thr Gln Glu Glu Lys Glu Leu
 1 5 10 15
 Leu Glu Val Ile Gly Lys Gly Thr Val Gln Glu Ala Gly Thr Leu Leu
 20 25 30
 Ser Ser Lys Asn Val Arg Val Asn Cys Leu Asp Glu Asn Gly Met Thr
 35 40 45
 Pro Leu Met His Ala Ala Tyr Lys Gly Lys Leu Asp Met Cys Lys Leu
 50 55 60
 Leu Leu Arg His Gly Ala Asp Val Asn Cys His Gln His Glu His Gly
 65 70 75 80
 Tyr Thr Ala Leu Met Phe Ala Ala Leu Ser Gly Asn Lys Asp Ile Thr
 85 90 95
 Trp Val Met Leu Glu Ala Gly Ala Glu Thr Asp Val Val Asn Ser Val
 100 105 110
 Gly Arg Thr Ala Ala Gln Met Ala Ala Phe Val Gly Gln His Asp Cys
 115 120 125
 Val Thr Ile Ile Asn Asn Phe Phe Pro Arg Glu Arg Leu Asp Tyr Tyr
 130 135 140
 Thr Lys Pro Gln Gly Leu Asp Lys Glu Pro Lys Leu Pro Pro Lys Leu
 145 150 155 160
 Ala Gly Pro Leu His Lys Ile Ile Thr Thr Thr Asn Leu His Pro Val
 165 170 175
 Lys Ile Val Met Leu Val Asn Glu Asn Pro Leu Leu Thr Glu Glu Ala
 180 185 190
 Ala Leu Asn Lys Cys Tyr Arg Val Met Asp Leu Ile Cys Glu Lys Cys
 195 200 205
 Met Lys Gln Arg Asp Met Asn Glu Val Leu Ala Met Lys Met His Tyr
 210 215 220
 Ile Ser Cys Ile Phe Gln Lys Cys Ile Asn Phe Leu Lys Asp Gly Glu
 225 230 235 240
 Asn Lys Leu Asp Thr Leu Ile Lys Ser Leu Leu Lys Gly Arg Ala Ser
 245 250 255
 Asp Gly Phe Pro Val Tyr Gln Glu Lys Ile Ile Arg Glu Ser Ile Arg
 260 265 270
 Lys Phe Pro Tyr Cys Glu Ala Thr Leu Leu Gln Gln Leu Val Arg Ser
 275 280 285
 Ile Ala Pro Val Glu Ile Gly Ser Asp Pro Thr Ala Phe Ser Val Leu
 290 295 300
 Thr Gln Ala Ile Thr Gly Gln Val Gly Phe Val Asp Val Glu Phe Cys
 305 310 315 320
 Thr Thr Cys Gly Glu Lys Gly Ala Ser Lys Arg Cys Ser Val Cys Lys
 325 330 335

```

Met Val Ile Tyr Cys Asp Gln Thr Cys Gln Lys Thr His Trp Phe Thr
      340                      345                      350
His Lys Lys Ile Cys Lys Asn Leu Lys Asp Ile Tyr Glu Lys Gln Gln
      355                      360                      365
Leu Glu Ala Ala Lys Glu Lys Arg Gln Glu Glu Asn His Gly Lys Leu
      370                      375                      380
Asp Val Asn Ser Asn Cys Val Asn Glu Glu Gln Pro Glu Ala Glu Val
      385                      390                      395                      400
Gly Ile Ser Gln Lys Asp Ser Asn Pro Glu Asp Ser Gly Glu Gly Lys
      405                      410                      415
Lys Glu Ser Leu Glu Ser Glu Ala Glu Leu Glu Gly Leu Gln Asp Ala
      420                      425                      430
Pro Ala Gly Pro Gln Val Ser Glu Glu
      435                      440 441

```

```

<210> 1010
<211> 1757
<212> PRT
<213> Homo sapiens

```

```

<400> 1010
Met Met Tyr Ile Thr Ile Tyr Ser Met Met Lys Ile Pro His Gln Thr
  1      5      10      15
Gln Lys Lys Arg Ser Leu Glu Asp Pro Asn Ser Arg Pro Arg Arg Arg
      20      25      30
Ser Asp Asp Leu Arg Thr Gly Leu Phe Gln Asp Val Gln Asp Ala Glu
      35      40      45
Ser Leu Lys Leu Pro Gly Val Tyr Glu Val Leu Phe Tyr Asn Glu Thr
      50      55      60
Glu Asp Cys Pro Gly Met Met Leu Trp Arg Tyr Pro Glu Pro Arg Gly
      65      70      75      80
Leu Thr Leu Val Arg Ile Thr Pro Val Pro Phe Asn Thr Thr Glu Asp
      85      90      95
Pro Asp Ile Ser Thr Ala Asp Leu Gly Asp Val Leu Gln Asp Pro Cys
      100      105      110
Ser Leu Glu Tyr Trp Asp Glu Leu Gln Lys Val Phe Val Ala Phe Arg
      115      120      125
Glu Phe Asn Leu Ser Glu Ser Lys Val Cys Glu Leu Gln Leu Pro Asp
      130      135      140
Ile Asn Leu Val Asn Asp Gln Lys Lys Leu Val Ser Ser Asp Leu Trp
      145      150      155      160
Arg Ile Val Leu Asn Ser Ser Gln Asn Gly Ala Asp Asp Gln Ser Ser
      165      170      175
Ala Ser Glu Ser Gly Ser Gln Ser Thr Cys Asp Pro Leu Val Thr Pro
      180      185      190
Thr Ala Leu Ala Ala Cys Thr Arg Val Asp Ser Cys Phe Thr Pro Trp
      195      200      205
Phe Val Pro Ser Leu Cys Val Ser Phe Gln Phe Ala His Leu Glu Phe
      210      215      220
His Leu Cys His His Leu Asp Gln Leu Gly Thr Ala Ala Pro Gln Tyr
      225      230      235      240
Leu Gln Pro Phe Val Ser Asp Arg Asn Met Pro Ser Glu Leu Glu Tyr
      245      250      255
Met Ile Val Ser Phe Arg Glu Pro His Met Tyr Leu Arg Gln Trp Asn
      260      265      270
Asn Gly Ser Val Cys Gln Glu Ile Gln Phe Leu Ala Gln Ala Asp Cys
      275      280      285
Lys Leu Leu Glu Cys Arg Asn Val Thr Met Gln Ser Val Val Lys Pro
      290      295      300
Phe Ser Ile Phe Gly Gln Met Ala Val Ser Ser Asp Val Val Glu Lys
      305      310      315      320

```

Leu Leu Asp Cys Thr Val Ile Val Asp Ser Val Phe Val Asn Leu Gly
 325 330 335
 Gln His Val Val His Ser Leu Asn Thr Ala Ile Gln Ala Trp Gln Gln
 340 345 350
 Asn Lys Cys Pro Glu Val Glu Glu Leu Val Phe Ser His Phe Val Ile
 355 360 365
 Cys Asn Asp Thr Gln Glu Thr Leu Arg Phe Gly Gln Val Asp Thr Asp
 370 375 380
 Glu Asn Ile Leu Leu Ala Ser Leu His Ser His Gln Tyr Ser Trp Arg
 385 390 395 400
 Ser His Lys Ser Pro Gln Leu Leu His Ile Cys Ile Glu Gly Trp Gly
 405 410 415
 Asn Trp Arg Trp Ser Glu Pro Phe Ser Val Asp His Ala Gly Thr Phe
 420 425 430
 Ile Arg Thr Ile Gln Tyr Arg Gly Arg Thr Ala Ser Leu Ile Ile Lys
 435 440 445
 Val Gln Gln Leu Asn Gly Val Gln Lys Gln Ile Ile Ile Cys Gly Arg
 450 455 460
 Gln Ile Ile Cys Ser Tyr Leu Ser Gln Ser Ile Glu Leu Lys Val Val
 465 470 475 480
 Gln His Tyr Ile Gly Gln Asp Gly Gln Ala Val Val Arg Glu His Phe
 485 490 495
 Asp Cys Leu Thr Ala Lys Gln Lys Leu Pro Ser Tyr Ile Leu Glu Asn
 500 505 510
 Asn Glu Leu Thr Glu Leu Cys Val Lys Ala Lys Gly Asp Glu Asp Trp
 515 520 525
 Ser Arg Asp Val Cys Leu Glu Ser Lys Ala Pro Glu Tyr Ser Ile Val
 530 535 540
 Ile Gln Val Pro Ser Ser Asn Ser Ser Ile Ile Tyr Val Trp Cys Thr
 545 550 555 560
 Val Leu Thr Leu Glu Pro Asn Ser Gln Val Gln Gln Arg Met Ile Val
 565 570 575
 Phe Ser Pro Leu Phe Ile Met Arg Ser His Leu Pro Asp Pro Ile Ile
 580 585 590
 Ile His Leu Glu Lys Arg Ser Leu Gly Leu Ser Glu Thr Gln Ile Ile
 595 600 605
 Pro Gly Lys Gly Gln Glu Lys Pro Leu Gln Asn Ile Glu Pro Asp Leu
 610 615 620
 Val His His Leu Thr Phe Gln Ala Arg Glu Glu Tyr Asp Pro Ser Asp
 625 630 635 640
 Cys Ala Val Pro Ile Ser Thr Ser Leu Ile Lys Gln Ile Ala Thr Lys
 645 650 655
 Val His Pro Gly Gly Thr Val Asn Gln Ile Leu Asp Glu Phe Tyr Gly
 660 665 670
 Pro Glu Lys Ser Leu Gln Pro Ile Trp Pro Tyr Asn Lys Lys Asp Ser
 675 680 685
 Asp Arg Asn Glu Gln Leu Ser Gln Trp Asp Ser Pro Met Arg Val Lys
 690 695 700
 Leu Ser Ile Trp Lys Pro Tyr Val Arg Thr Leu Leu Ile Glu Leu Leu
 705 710 715 720
 Pro Trp Ala Leu Leu Ile Asn Glu Ser Lys Trp Asp Leu Trp Leu Phe
 725 730 735
 Glu Gly Glu Lys Ile Val Leu Gln Val Pro Ala Gly Lys Ile Ile Ile
 740 745 750
 Pro Pro Asn Phe Gln Glu Ala Phe Gln Ile Gly Ile Tyr Trp Ala Asn
 755 760 765
 Thr Asn Thr Val His Lys Ser Val Ala Ile Lys Leu Val His Asn Leu
 770 775 780
 Thr Ser Pro Lys Trp Lys Asp Gly Gly Asn Gly Glu Val Val Thr Leu
 785 790 795 800
 Asp Glu Glu Ala Phe Val Asp Thr Glu Ile Arg Leu Gly Ala Phe Pro
 805 810 815
 Gly His Gln Lys Leu Cys Gln Phe Cys Ile Ser Ser Met Val Gln Gln
 820 825 830

2756

His Thr Pro Leu Ser Phe Ser Val Phe Glu Arg Gly Pro Ile Phe Thr
 1345 1350 1355 1360
 Thr Ala Arg Gln Leu Val His Ala Leu Ala Met His Tyr Ala Ala Gly
 1365 1370 1375
 Ala Leu Phe Arg Ala Gly Trp Val Val Gly Ser Leu Asp Ile Leu Gly
 1380 1385 1390
 Ser Pro Ala Ser Leu Val Arg Ser Ile Gly Asn Gly Val Ala Asp Phe
 1395 1400 1405
 Phe Arg Leu Pro Tyr Glu Gly Leu Thr Arg Gly Pro Gly Ala Phe Val
 1410 1415 1420
 Ser Gly Val Ser Arg Gly Thr Thr Ser Phe Val Lys His Ile Ser Lys
 1425 1430 1435 1440
 Gly Thr Leu Thr Ser Ile Thr Asn Leu Ala Thr Ser Leu Ala Arg Asn
 1445 1450 1455
 Met Asp Arg Leu Ser Leu Asp Glu Glu His Tyr Asn Arg Gln Glu Glu
 1460 1465 1470
 Trp Arg Arg Gln Leu Pro Glu Ser Leu Gly Glu Gly Leu Arg Gln Gly
 1475 1480 1485
 Leu Ser Arg Leu Gly Ile Ser Leu Leu Gly Ala Ile Ala Gly Ile Val
 1490 1495 1500
 Asp Gln Pro Met Gln Asn Phe Gln Lys Thr Ser Glu Ala Gln Ala Ser
 1505 1510 1515 1520
 Ala Gly His Lys Ala Lys Gly Val Ile Ser Gly Val Gly Lys Gly Ile
 1525 1530 1535
 Met Gly Val Phe Thr Lys Pro Ile Gly Gly Ala Ala Glu Leu Val Ser
 1540 1545 1550
 Gln Thr Gly Tyr Gly Ile Leu His Gly Ala Gly Leu Ser Gln Leu Pro
 1555 1560 1565
 Lys Gln Arg His Gln Pro Ser Asp Leu His Ala Asp Gln Ala Pro Asn
 1570 1575 1580
 Ser His Val Lys Tyr Val Trp Lys Met Leu Gln Ser Leu Gly Arg Pro
 1585 1590 1595 1600
 Glu Val His Met Ala Leu Asp Val Val Leu Val Arg Gly Ser Gly Gln
 1605 1610 1615
 Glu His Glu Gly Cys Leu Leu Leu Thr Ser Glu Val Leu Phe Val Val
 1620 1625 1630
 Ser Val Ser Glu Asp Thr Gln Gln Gln Ala Phe Pro Val Thr Glu Ile
 1635 1640 1645
 Asp Cys Ala Gln Asp Ser Lys Gln Asn Asn Leu Leu Thr Val Gln Leu
 1650 1655 1660
 Lys Gln Pro Arg Val Ala Cys Asp Val Glu Val Asp Gly Val Arg Glu
 1665 1670 1675 1680
 Arg Leu Ser Glu Gln Gln Tyr Asn Arg Leu Val Asp Tyr Ile Thr Lys
 1685 1690 1695
 Thr Ser Cys His Leu Ala Pro Ser Cys Ser Ser Met Gln Ile Pro Cys
 1700 1705 1710
 Pro Val Val Ala Ala Glu Pro Pro Ser Thr Val Lys Thr Tyr His
 1715 1720 1725
 Tyr Leu Val Asp Pro His Phe Ala Gln Val Phe Leu Ser Lys Phe Thr
 1730 1735 1740
 Met Val Lys Asn Lys Ala Leu Arg Lys Gly Phe Pro *
 1745 1750 1755 1756

<210> 1011
 <211> 769
 <212> PRT
 <213> Homo sapiens

<400> 1011
 Met Ser Phe Ser Met Gly Gln Leu Leu Pro Thr Leu Gly His Leu Asp
 1 5 10 15

Ser Lys Pro Ser Ser Lys Ser Asn Met Ile Arg Gly Arg Asn Ser Ala
 20 25 30
 Thr Ser Ala Asp Glu Gln Pro His Ile Gly Asn Tyr Arg Leu Leu Lys
 35 40 45
 Thr Ile Gly Lys Gly Asn Phe Ala Lys Val Lys Leu Ala Arg His Ile
 50 55 60
 Leu Thr Gly Lys Glu Val Ala Val Lys Ile Ile Asp Lys Thr Gln Leu
 65 70 75 80
 Asn Ser Ser Ser Leu Gln Lys Leu Phe Arg Glu Val Arg Ile Met Lys
 85 90 95
 Val Leu Asn His Pro Asn Ile Val Lys Leu Phe Glu Val Ile Glu Thr
 100 105 110
 Glu Lys Thr Leu Tyr Leu Val Met Glu Tyr Ala Ser Gly Gly Glu Val
 115 120 125
 Phe Asp Tyr Leu Val Ala His Gly Arg Met Lys Glu Lys Glu Ala Arg
 130 135 140
 Ala Lys Phe Arg Gln Ile Val Ser Ala Val Gln Tyr Cys His Gln Lys
 145 150 155 160
 Phe Ile Val His Arg Asp Leu Lys Ala Glu Asn Leu Leu Leu Asp Ala
 165 170 175
 Asp Met Asn Ile Lys Ile Ala Asp Phe Gly Phe Ser Asn Glu Phe Thr
 180 185 190
 Phe Gly Asn Lys Leu Asp Thr Phe Cys Gly Ser Pro Pro Tyr Ala Ala
 195 200 205
 Pro Glu Leu Phe Gln Gly Lys Lys Tyr Asp Gly Pro Glu Val Asp Val
 210 215 220
 Trp Ser Leu Gly Val Ile Leu Tyr Thr Leu Val Ser Gly Ser Leu Pro
 225 230 235 240
 Phe Asp Gly Gln Asn Leu Lys Glu Leu Arg Glu Arg Val Leu Arg Gly
 245 250 255
 Lys Tyr Arg Ile Pro Phe Tyr Met Ser Thr Asp Cys Glu Asn Leu Leu
 260 265 270
 Lys Lys Phe Leu Ile Leu Asn Pro Ser Lys Arg Gly Thr Leu Glu Gln
 275 280 285
 Ile Met Lys Asp Arg Trp Met Asn Val Gly His Glu Asp Asp Glu Leu
 290 295 300
 Lys Pro Tyr Val Glu Pro Leu Pro Asp Tyr Lys Asp Pro Arg Arg Thr
 305 310 315 320
 Glu Leu Met Val Ser Met Gly Tyr Thr Arg Glu Glu Ile Gln Asp Ser
 325 330 335
 Leu Val Gly Gln Arg Tyr Asn Glu Val Met Ala Thr Tyr Leu Leu Leu
 340 345 350
 Gly Tyr Lys Ser Ser Glu Leu Glu Gly Asp Thr Ile Thr Leu Lys Pro
 355 360 365
 Arg Pro Ser Ala Asp Leu Thr Asn Ser Ser Ala His Pro His Pro Thr
 370 375 380
 Arg Tyr Arg Ser Val Ser Ala Asn Pro Lys Gln Arg Arg Phe Ser Asp
 385 390 395 400
 Gln Ala Gly Pro Pro Ile Pro Thr Ser Asn Ser Tyr Ser Lys Lys Thr
 405 410 415
 Gln Ser Asn Asn Ala Glu Asn Lys Arg Pro Glu Glu Asp Arg Glu Ser
 420 425 430
 Gly Arg Lys Ala Ser Ser Thr Ala Lys Val Pro Ala Ser Pro Leu Pro
 435 440 445
 Gly Leu Glu Arg Lys Lys Thr Thr Pro Thr Pro Ser Thr Asn Ser Val
 450 455 460
 Leu Ser Thr Ser Thr Asn Arg Ser Arg Asn Ser Pro Leu Leu Glu Arg
 465 470 475 480
 Ala Ser Leu Gly Gln Ala Ser Ile Gln Asn Gly Lys Asp Ser Leu Thr
 485 490 495
 Met Pro Gly Ser Arg Ala Ser Thr Ala Ser Ala Ser Ala Val Ser
 500 505 510
 Ala Ala Arg Pro Arg Gln His Gln Lys Ser Met Ser Ala Ser Val His
 515 520 525

```

Pro Asn Lys Ala Ser Gly Leu Pro Pro Thr Glu Ser Asn Cys Glu Val
530          535          540
Pro Arg Pro Ser Thr Ala Pro Gln Arg Val Pro Val Ala Ser Pro Ser
545          550          555          560
Ala His Asn Ile Ser Ser Ser Gly Gly Ala Pro Asp Arg Thr Asn Phe
565          570          575
Pro Arg Gly Val Ser Ser Arg Ser Thr Phe His Ala Gly Gln Leu Arg
580          585          590
Gln Val Arg Asp Gln Gln Asn Leu Pro Tyr Gly Val Thr Pro Ala Ser
595          600          605
Pro Ser Gly His Ser Gln Gly Arg Arg Gly Ala Ser Gly Ser Ile Phe
610          615          620
Ser Lys Phe Thr Ser Lys Phe Val Arg Arg Asn Leu Asn Glu Pro Glu
625          630          635          640
Ser Lys Asp Arg Val Glu Thr Leu Arg Pro His Val Val Gly Ser Gly
645          650          655
Gly Asn Asp Lys Glu Lys Glu Glu Phe Arg Glu Ala Lys Pro Arg Ser
660          665          670
Leu Arg Phe Thr Trp Ser Met Lys Thr Thr Ser Ser Met Glu Pro Asn
675          680          685
Glu Met Met Arg Glu Ile Arg Lys Val Leu Asp Ala Asn Ser Cys Gln
690          695          700
Ser Glu Leu His Glu Lys Tyr Met Leu Leu Cys Met His Gly Thr Pro
705          710          715          720
Gly His Glu Asp Phe Val Gln Trp Glu Met Glu Val Cys Lys Leu Pro
725          730          735
Arg Leu Ser Leu Asn Gly Val Arg Phe Lys Arg Ile Ser Gly Thr Ser
740          745          750
Met Ala Phe Lys Asn Ile Ala Ser Lys Ile Ala Asn Glu Leu Lys Leu
755          760          765          768

```

*

```

<210> 1012
<211> 1055
<212> PRT
<213> Homo sapiens

```

```

<400> 1012
Met Glu Val Cys Ala Ala Phe Glu Ala Lys Glu Glu Thr Tyr Lys Ser
1          5          10          15
Leu Met Gln Lys Gly Gln Gln Met Leu Ala Arg Cys Pro Lys Ser Ala
20          25          30
Glu Thr Asn Ile Asp Gln Asp Ile Asn Asn Leu Lys Glu Lys Trp Glu
35          40          45
Ser Val Glu Thr Lys Leu Asn Glu Arg Lys Thr Lys Leu Glu Glu Ala
50          55          60
Leu Asn Leu Ala Met Glu Phe His Asn Ser Leu Gln Asp Phe Ile Asn
65          70          75          80
Trp Leu Thr Gln Ala Glu Gln Thr Leu Asn Val Ala Ser Arg Pro Ser
85          90          95
Leu Ile Leu Asp Thr Val Leu Phe Gln Ile Asp Glu His Lys Val Phe
100         105         110
Ala Asn Glu Val Asn Ser His Arg Glu Gln Ile Ile Glu Leu Asp Lys
115         120         125
Thr Gly Thr His Leu Lys Tyr Phe Ser Gln Lys Gln Asp Val Val Leu
130         135         140
Ile Lys Asn Leu Leu Ile Ser Val Gln Ser Arg Trp Glu Lys Val Val
145         150         155         160
Gln Arg Leu Val Glu Arg Gly Arg Ser Leu Asp Asp Ala Arg Lys Arg
165         170         175

```

Ala	Lys	Gln	Phe	His	Glu	Ala	Trp	Ser	Lys	Leu	Met	Glu	Trp	Leu	Glu		
			180					185					190				
Glu	Ser	Glu	Lys	Ser	Leu	Asp	Ser	Glu	Leu	Glu	Ile	Ala	Asn	Asp	Pro		
		195				200					205						
Asp	Lys	Ile	Lys	Thr	Gln	Leu	Ala	Gln	His	Lys	Glu	Phe	Gln	Lys	Ser		
	210				215						220						
Leu	Gly	Ala	Lys	His	Ser	Val	Tyr	Asp	Thr	Thr	Asn	Arg	Thr	Gly	Arg		
	225				230					235					240		
Ser	Leu	Lys	Glu	Lys	Thr	Ser	Leu	Ala	Asp	Asp	Asn	Leu	Lys	Leu	Asp		
			245						250					255			
Asp	Met	Leu	Ser	Glu	Leu	Arg	Asp	Lys	Trp	Asp	Thr	Ile	Cys	Gly	Lys		
		260						265					270				
Ser	Val	Glu	Arg	Gln	Asn	Lys	Leu	Glu	Glu	Ala	Leu	Leu	Phe	Ser	Gly		
	275						280						285				
Gln	Phe	Thr	Asp	Ala	Leu	Gln	Ala	Leu	Ile	Asp	Trp	Leu	Tyr	Arg	Val		
	290				295						300						
Glu	Pro	Gln	Leu	Ala	Glu	Asp	Gln	Pro	Val	His	Gly	Asp	Ile	Asp	Leu		
	305				310					315					320		
Val	Met	Asn	Leu	Ile	Asp	Asn	His	Lys	Ala	Phe	Gln	Lys	Glu	Leu	Gly		
			325						330					335			
Lys	Arg	Thr	Ser	Ser	Val	Gln	Ala	Leu	Lys	Arg	Ser	Ala	Arg	Glu	Leu		
		340						345					350				
Ile	Glu	Gly	Ser	Arg	Asp	Asp	Ser	Ser	Trp	Val	Lys	Val	Gln	Met	Gln		
	355				360							365					
Glu	Leu	Ser	Thr	Arg	Trp	Glu	Thr	Val	Cys	Ala	Leu	Ser	Ile	Ser	Lys		
	370				375						380						
Gln	Thr	Arg	Leu	Glu	Ala	Leu	Arg	Gln	Ala	Glu	Glu	Phe	His	Ser			
	385				390					395				400			
Val	Val	His	Ala	Leu	Leu	Glu	Trp	Leu	Ala	Glu	Ala	Glu	Gln	Thr	Leu		
			405					410						415			
Arg	Phe	His	Gly	Val	Leu	Pro	Asp	Asp	Glu	Asp	Ala	Leu	Arg	Thr	Leu		
		420					425						430				
Ile	Asp	Gln	His	Lys	Glu	Phe	Met	Lys	Lys	Leu	Glu	Glu	Lys	Arg	Ala		
	435					440					445						
Glu	Leu	Asn	Lys	Ala	Thr	Thr	Met	Gly	Asp	Thr	Val	Leu	Ala	Ile	Cys		
	450				455						460						
His	Pro	Asp	Ser	Ile	Thr	Thr	Ile	Lys	His	Trp	Ile	Thr	Ile	Ile	Arg		
	465				470					475					480		
Ala	Arg	Phe	Glu	Glu	Val	Leu	Ala	Trp	Ala	Lys	Gln	His	Gln	Gln	Arg		
			485					490						495			
Leu	Ala	Ser	Ala	Leu	Ala	Gly	Leu	Ile	Ala	Lys	Gln	Glu	Leu	Leu	Glu		
		500					505					510					
Ala	Leu	Leu	Ala	Trp	Leu	Gln	Trp	Ala	Glu	Thr	Thr	Leu	Thr	Asp	Lys		
	515					520						525					
Asp	Lys	Glu	Val	Ile	Pro	Gln	Glu	Ile	Glu	Glu	Val	Lys	Ala	Leu	Ile		
	530				535						540						
Ala	Glu	His	Gln	Thr	Phe	Met	Glu	Glu	Met	Thr	Arg	Lys	Gln	Pro	Asp		
	545				550					555					560		
Val	Asp	Lys	Val	Thr	Lys	Thr	Tyr	Lys	Arg	Arg	Ala	Ala	Asp	Pro	Ser		
			565					570						575			
Ser	Leu	Gln	Ser	His	Ile	Pro	Val	Leu	Asp	Lys	Gly	Arg	Ala	Gly	Arg		
		580						585					590				
Lys	Arg	Phe	Pro	Ala	Ser	Ser	Leu	Tyr	Pro	Ser	Gly	Ser	Gln	Thr	Gln		
	595					600						605					
Ile	Glu	Thr	Lys	Asn	Pro	Arg	Val	Asn	Leu	Leu	Val	Ser	Lys	Trp	Gln		
	610				615						620						
Gln	Val	Trp	Leu	Leu	Ala	Leu	Glu	Arg	Arg	Arg	Lys	Leu	Asn	Asp	Ala		
	625				630					635					640		
Leu	Asp	Arg	Leu	Glu	Glu	Leu	Arg	Glu	Phe	Ala	Asn	Phe	Asp	Phe	Asp		
			645						650					655			
Ile	Trp	Arg	Lys	Tyr	Met	Arg	Trp	Met	Asn	His	Lys	Lys	Ser	Arg			
		660					665					670					
Val	Met	Asp	Phe	Phe	Arg	Arg	Ile	Asp	Lys	Asp	Gln	Asp	Gly	Lys	Ile		
		675					680					685					

```

Thr Arg Gln Glu Phe Ile Asp Gly Ile Leu Ser Ser Lys Phe Pro Thr
690                               695                               700
Ser Arg Leu Glu Met Ser Ala Val Ala Asp Ile Phe Asp Arg Asp Gly
705                               710                               715                               720
Asp Gly Tyr Ile Asp Tyr Tyr Glu Phe Val Ala Ala Leu His Pro Asn
725                               730                               735
Lys Asp Ala Tyr Lys Pro Ile Thr Asp Ala Asp Lys Ile Glu Asp Glu
740                               745                               750
Val Thr Arg Gln Val Ala Lys Cys Lys Cys Ala Lys Arg Phe Gln Val
755                               760                               765
Glu Gln Ile Gly Asp Asn Lys Tyr Arg Phe Phe Leu Gly Asn Gln Phe
770                               775                               780
Gly Asp Ser Gln Gln Leu Arg Leu Val Arg Ile Leu Arg Ser Thr Val
785                               790                               795                               800
Met Val Arg Val Gly Gly Gly Trp Met Ala Leu Asp Glu Phe Leu Val
805                               810                               815
Lys Asn Asp Pro Cys Arg Ala Lys Gly Arg Thr Asn Met Glu Leu Arg
820                               825                               830
Glu Lys Phe Ile Leu Ala Asp Gly Ala Ser Gln Gly Met Ala Ala Phe
835                               840                               845
Arg Pro Arg Gly Arg Arg Ser Arg Pro Ser Ser Arg Gly Ala Ser Pro
850                               855                               860
Asn Arg Ser Thr Ser Val Ser Ser Gln Ala Ala Gln Ala Ala Ser Pro
865                               870                               875                               880
Gln Val Pro Ala Thr Thr Thr Pro Lys Ile Leu His Pro Leu Thr Arg
885                               890                               895
Asn Tyr Gly Lys Pro Trp Leu Thr Asn Ser Lys Met Ser Thr Pro Cys
900                               905                               910
Lys Ala Ala Glu Cys Ser Asp Phe Pro Val Pro Ser Ala Glu Gly Thr
915                               920                               925
Pro Ile Gln Gly Ser Lys Leu Arg Leu Pro Gly Tyr Leu Ser Gly Lys
930                               935                               940
Gly Phe His Ser Gly Glu Asp Ser Gly Leu Ile Thr Thr Ala Ala Ala
945                               950                               955                               960
Arg Val Arg Thr Gln Phe Ala Asp Ser Lys Lys Thr Pro Ser Arg Pro
965                               970                               975
Gly Ser Arg Ala Gly Ser Lys Ala Gly Ser Arg Ala Ser Ser Arg Arg
980                               985                               990
Gly Ser Asp Ala Ser Asp Phe Asp Ile Ser Glu Ile Gln Ser Val Cys
995                               1000                               1005
Ser Asp Val Glu Thr Val Pro Gln Thr His Arg Pro Thr Pro Arg Ala
1010                               1015                               1020
Gly Ser Arg Pro Ser Thr Ala Lys Pro Ser Lys Ile Pro Thr Pro Gln
1025                               1030                               1035                               1040
Arg Lys Ser Pro Ala Ser Lys Leu Asp Lys Ser Ser Lys Arg *
1045                               1050                               1054

```

```

<210> 1013
<211> 1018
<212> PRT
<213> Homo sapiens

```

```

<400> 1013
Met Glu Val Cys Ala Ala Phe Glu Ala Lys Glu Glu Thr Tyr Lys Ser
1      5      10      15
Leu Met Gln Lys Gly Gln Gln Met Leu Ala Arg Cys Pro Lys Ser Ala
20      25      30
Glu Thr Asn Ile Asp Gln Asp Ile Asn Asn Leu Lys Glu Lys Trp Glu
35      40      45
Ser Val Glu Thr Lys Leu Asn Glu Arg Lys Thr Lys Leu Glu Glu Ala
50      55      60

```

Leu	Asn	Leu	Ala	Met	Glu	Phe	His	Asn	Ser	Leu	Gln	Asp	Phe	Ile	Asn
65					70					75					80
Trp	Leu	Thr	Gln	Ala	Glu	Gln	Thr	Leu	Asn	Val	Ala	Ser	Arg	Pro	Ser
			85						90						95
Leu	Ile	Leu	Asp	Thr	Val	Leu	Phe	Gln	Ile	Asp	Glu	His	Lys	Val	Phe
			100					105					110		
Ala	Asn	Glu	Val	Asn	Ser	His	Arg	Glu	Gln	Ile	Ile	Glu	Leu	Asp	Lys
		115					120					125			
Thr	Gly	Thr	His	Leu	Lys	Tyr	Phe	Ser	Gln	Lys	Gln	Asp	Val	Val	Leu
	130					135					140				
Ile	Lys	Asn	Leu	Leu	Ile	Ser	Val	Gln	Ser	Arg	Trp	Glu	Lys	Val	Val
145					150					155					160
Gln	Arg	Leu	Val	Glu	Arg	Gly	Arg	Ser	Leu	Asp	Asp	Ala	Arg	Lys	Arg
			165						170					175	
Ala	Lys	Gln	Phe	His	Glu	Ala	Trp	Ser	Lys	Leu	Met	Glu	Trp	Leu	Glu
			180					185					190		
Glu	Ser	Glu	Lys	Ser	Leu	Asp	Ser	Glu	Leu	Glu	Ile	Ala	Asn	Asp	Pro
		195					200					205			
Asp	Lys	Ile	Lys	Thr	Gln	Leu	Ala	Gln	His	Lys	Glu	Phe	Gln	Lys	Ser
	210					215					220				
Leu	Gly	Ala	Lys	His	Ser	Val	Tyr	Asp	Thr	Thr	Asn	Arg	Thr	Gly	Arg
225					230					235					240
Ser	Leu	Lys	Glu	Lys	Thr	Ser	Leu	Ala	Asp	Asp	Asn	Leu	Lys	Leu	Asp
			245						250					255	
Asp	Met	Leu	Ser	Glu	Leu	Arg	Asp	Lys	Trp	Asp	Thr	Ile	Cys	Gly	Lys
		260						265					270		
Ser	Val	Glu	Arg	Gln	Asn	Lys	Leu	Glu	Glu	Ala	Leu	Leu	Phe	Ser	Gly
		275					280					285			
Gln	Phe	Thr	Asp	Ala	Leu	Gln	Ala	Leu	Ile	Asp	Trp	Leu	Tyr	Arg	Val
	290					295					300				
Glu	Pro	Gln	Leu	Ala	Glu	Asp	Gln	Pro	Val	His	Gly	Asp	Ile	Asp	Leu
305					310					315					320
Val	Met	Asn	Leu	Ile	Asp	Asn	His	Lys	Ala	Phe	Gln	Lys	Glu	Leu	Gly
			325						330					335	
Lys	Arg	Thr	Ser	Ser	Val	Gln	Ala	Leu	Lys	Arg	Ser	Ala	Arg	Glu	Leu
		340						345					350		
Ile	Glu	Gly	Ser	Arg	Asp	Asp	Ser	Ser	Trp	Val	Lys	Val	Gln	Met	Gln
	355					360						365			
Glu	Leu	Ser	Thr	Arg	Trp	Glu	Thr	Val	Cys	Ala	Leu	Ser	Ile	Ser	Lys
	370					375					380				
Gln	Thr	Arg	Leu	Glu	Ala	Leu	Arg	Gln	Ala	Glu	Glu	Phe	His	Ser	
385					390					395					400
Val	Val	His	Ala	Leu	Leu	Glu	Trp	Leu	Ala	Glu	Ala	Glu	Gln	Thr	Leu
			405						410					415	
Arg	Phe	His	Gly	Val	Leu	Pro	Asp	Asp	Glu	Asp	Ala	Leu	Arg	Thr	Leu
		420					425						430		
Ile	Asp	Gln	His	Lys	Glu	Phe	Met	Lys	Lys	Leu	Glu	Glu	Lys	Arg	Ala
	435						440					445			
Glu	Leu	Asn	Lys	Ala	Thr	Thr	Met	Gly	Asp	Thr	Val	Leu	Ala	Ile	Cys
	450					455					460				
His	Pro	Asp	Ser	Ile	Thr	Thr	Ile	Lys	His	Trp	Ile	Thr	Ile	Ile	Arg
465					470					475					480
Ala	Arg	Phe	Glu	Glu	Val	Leu	Ala	Trp	Ala	Lys	Gln	His	Gln	Gln	Arg
			485						490					495	
Leu	Ala	Ser	Ala	Leu	Ala	Gly	Leu	Ile	Ala	Lys	Gln	Glu	Leu	Leu	Glu
			500					505					510		
Ala	Leu	Leu	Ala	Trp	Leu	Gln	Trp	Ala	Glu	Thr	Thr	Leu	Thr	Asp	Lys
	515						520					525			
Asp	Lys	Glu	Val	Ile	Pro	Gln	Glu	Ile	Glu	Glu	Val	Lys	Ala	Leu	Ile
	530					535					540				
Ala	Glu	His	Gln	Thr	Phe	Met	Glu	Glu	Met	Thr	Arg	Lys	Gln	Pro	Asp
545					550					555					560
Val	Asp	Lys	Val	Thr	Lys	Thr	Tyr	Lys	Arg	Arg	Ala	Ala	Asp	Pro	Ser
			565						570					575	

Ser Leu Gln Ser His Ile Pro Val Leu Asp Lys Gly Arg Ala Gly Arg
 580 585 590
 Lys Arg Phe Pro Ala Ser Ser Leu Tyr Pro Ser Gly Ser Gln Thr Gln
 595 600 605
 Ile Glu Thr Lys Asn Pro Arg Val Asn Leu Leu Val Ser Lys Trp Gln
 610 615 620
 Gln Val Trp Leu Leu Ala Leu Glu Arg Arg Arg Lys Leu Asn Asp Ala
 625 630 635 640
 Leu Asp Arg Leu Glu Glu Leu Arg Glu Phe Ala Asn Phe Asp Phe Asp
 645 650 655
 Ile Trp Arg Lys Lys Tyr Met Arg Trp Met Asn His Lys Lys Ser Arg
 660 665 670
 Val Met Asp Phe Phe Arg Arg Ile Asp Lys Asp Gln Asp Gly Lys Ile
 675 680 685
 Thr Arg Gln Glu Phe Ile Asp Gly Ile Leu Ser Ser Lys Phe Pro Thr
 690 695 700
 Ser Arg Leu Glu Met Ser Ala Val Ala Asp Ile Phe Asp Arg Asp Gly
 705 710 715 720
 Asp Gly Tyr Ile Asp Tyr Tyr Glu Phe Val Ala Ala Leu His Pro Asn
 725 730 735
 Lys Asp Ala Tyr Lys Pro Ile Thr Asp Ala Asp Lys Ile Glu Asp Glu
 740 745 750
 Val Thr Arg Gln Val Ala Lys Cys Lys Cys Ala Lys Arg Phe Gln Val
 755 760 765
 Glu Gln Ile Gly Asp Asn Lys Tyr Arg Phe Phe Leu Gly Asn Gln Phe
 770 775 780
 Gly Asp Ser Gln Gln Leu Arg Leu Val Arg Ile Leu Arg Ser Thr Val
 785 790 795 800
 Met Val Arg Val Gly Gly Gly Trp Met Ala Leu Asp Glu Phe Leu Val
 805 810 815
 Lys Asn Asp Pro Cys Arg Ala Lys Gly Arg Thr Asn Met Glu Leu Arg
 820 825 830
 Glu Lys Phe Ile Leu Ala Asp Gly Ala Ser Gln Gly Met Ala Ala Phe
 835 840 845
 Arg Pro Arg Gly Arg Arg Ser Arg Pro Ser Ser Arg Gly Ala Ser Pro
 850 855 860
 Asn Arg Ser Thr Ser Val Ser Ser Gln Ala Ala Gln Ala Ala Ser Pro
 865 870 875 880
 Gln Val Pro Ala Thr Thr Thr Pro Lys Gly Thr Pro Ile Gln Gly Ser
 885 890 895
 Lys Leu Arg Leu Pro Gly Tyr Leu Ser Gly Lys Gly Phe His Ser Gly
 900 905 910
 Glu Asp Ser Gly Leu Ile Thr Thr Ala Ala Ala Arg Val Arg Thr Gln
 915 920 925
 Phe Ala Asp Ser Lys Lys Thr Pro Ser Arg Pro Gly Ser Arg Ala Gly
 930 935 940
 Ser Lys Ala Gly Ser Arg Ala Ser Ser Arg Arg Gly Ser Asp Ala Ser
 945 950 955 960
 Asp Phe Asp Ile Ser Glu Ile Gln Ser Val Cys Ser Asp Val Glu Thr
 965 970 975
 Val Pro Gln Thr His Arg Pro Thr Pro Arg Ala Gly Ser Arg Pro Ser
 980 985 990
 Thr Ala Lys Pro Ser Lys Ile Pro Thr Pro Gln Arg Lys Ser Pro Ala
 995 1000 1005
 Ser Lys Leu Asp Lys Ser Ser Lys Arg *
 1010 1015 1017

<210> 1014
 <211> 684
 <212> PRT
 <213> Homo sapiens

<400> 1014

Met	Ala	Ala	Gly	Gly	Ala	Glu	Gly	Gly	Ser	Gly	Pro	Gly	Ala	Ala	Met
1				5					10					15	
Gly	Asp	Cys	Ala	Glu	Ile	Lys	Ser	Gln	Phe	Arg	Thr	Arg	Glu	Gly	Phe
		20						25					30		
Tyr	Lys	Leu	Leu	Pro	Gly	Asp	Gly	Ala	Ala	Arg	Arg	Ser	Gly	Pro	Ala
		35					40					45			
Ser	Ala	Gln	Thr	Pro	Val	Pro	Pro	Gln	Pro	Pro	Gln	Pro	Pro	Pro	Gly
		50				55					60				
Pro	Ala	Ser	Ala	Ser	Gly	Pro	Gly	Ala	Ala	Gly	Pro	Ala	Ser	Ser	Pro
		65			70					75				80	
Pro	Pro	Ala	Gly	Pro	Gly	Pro	Gly	Pro	Ala	Leu	Pro	Ala	Val	Arg	Leu
			85					90						95	
Ser	Leu	Val	Arg	Leu	Gly	Glu	Pro	Asp	Ser	Ala	Gly	Ala	Gly	Glu	Pro
			100					105					110		
Pro	Ala	Thr	Pro	Ala	Gly	Leu	Gly	Ser	Gly	Gly	Asp	Arg	Val	Cys	Phe
		115				120					125				
Asn	Leu	Gly	Arg	Glu	Leu	Tyr	Phe	Tyr	Pro	Gly	Cys	Cys	Arg	Arg	Gly
		130				135					140				
Ser	Gln	Arg	Trp	His	Thr	Pro	Leu	Thr	Pro	Phe	Leu	Pro	Pro	Leu	Lys
		145			150					155				160	
Ser	Ile	Asp	Leu	Asn	Lys	Pro	Ile	Asp	Lys	Arg	Ile	Tyr	Lys	Gly	Thr
			165					170						175	
Gln	Pro	Thr	Cys	His	Asp	Phe	Asn	Gln	Phe	Thr	Ala	Ala	Thr	Glu	Thr
			180					185					190		
Ile	Ser	Leu	Leu	Val	Gly	Phe	Ser	Ala	Gly	Gln	Val	Gln	Tyr	Leu	Asp
		195					200				205				
Leu	Ile	Lys	Lys	Asp	Thr	Ser	Lys	Leu	Phe	Asn	Glu	Glu	Arg	Leu	Ile
		210				215					220				
Asp	Lys	Thr	Lys	Val	Thr	Tyr	Leu	Lys	Trp	Leu	Pro	Glu	Ser	Glu	Ser
		225			230					235				240	
Leu	Phe	Leu	Ala	Ser	His	Ala	Ser	Gly	His	Leu	Tyr	Leu	Tyr	Asn	Val
			245					250						255	
Ser	His	Pro	Cys	Ala	Ser	Ala	Pro	Pro	Gln	Tyr	Ser	Leu	Leu	Lys	Gln
			260					265				270			
Gly	Glu	Gly	Phe	Ser	Val	Tyr	Ala	Ala	Lys	Ser	Lys	Ala	Pro	Arg	Asn
		275					280					285			
Pro	Leu	Ala	Lys	Trp	Ala	Val	Gly	Glu	Gly	Pro	Leu	Asn	Glu	Phe	Ala
		290				295					300				
Phe	Ser	Pro	Asp	Gly	Arg	His	Leu	Ala	Cys	Val	Ser	Gln	Asp	Gly	Cys
		305			310					315				320	
Leu	Arg	Val	Phe	His	Phe	Asp	Ser	Met	Leu	Leu	Arg	Gly	Leu	Met	Lys
			325					330						335	
Ser	Tyr	Phe	Gly	Gly	Leu	Leu	Cys	Val	Cys	Trp	Ser	Pro	Asp	Gly	Arg
		340						345				350			
Tyr	Val	Val	Thr	Gly	Gly	Glu	Asp	Asp	Leu	Val	Thr	Val	Trp	Ser	Phe
		355					360					365			
Thr	Glu	Gly	Arg	Val	Val	Ala	Arg	Gly	His	Gly	His	Lys	Ser	Trp	Val
		370				375					380				
Asn	Ala	Val	Ala	Phe	Asp	Pro	Tyr	Thr	Thr	Arg	Ala	Glu	Glu	Ala	Ala
		385			390					395				400	
Thr	Ala	Ala	Gly	Ala	Asp	Gly	Glu	Arg	Ser	Gly	Glu	Glu	Glu	Glu	Glu
			405						410					415	
Glu	Pro	Glu	Ala	Ala	Gly	Thr	Gly	Ser	Ala	Gly	Gly	Ala	Pro	Leu	Ser
		420						425				430			
Pro	Leu	Pro	Lys	Ala	Gly	Ser	Ile	Thr	Tyr	Arg	Phe	Gly	Ser	Ala	Gly
		435					440					445			
Gln	Asp	Thr	Gln	Phe	Cys	Leu	Trp	Asp	Leu	Thr	Glu	Asp	Val	Leu	Tyr
		450				455					460				
Pro	His	Pro	Pro	Leu	Ala	Arg	Thr	Arg	Thr	Leu	Pro	Gly	Thr	Pro	Gly
		465			470					475				480	
Thr	Thr	Pro	Pro	Ala	Ala	Ser	Ser	Ser	Arg	Gly	Gly	Glu	Pro	Gly	Pro
			485						490					495	

Gly Pro Leu Pro Arg Ser Leu Ser Arg Ser Asn Ser Leu Pro His Pro
 500 505 510
 Ala Gly Gly Gly Lys Ala Gly Gly Pro Gly Val Ala Ala Glu Pro Gly
 515 520 525
 Thr Pro Phe Ser Ile Gly Arg Phe Ala Thr Leu Thr Leu Gln Glu Arg
 530 535 540
 Arg Asp Arg Gly Ala Glu Lys Glu His Lys Arg Tyr His Ser Leu Gly
 545 550 555 560
 Asn Ile Ser Arg Gly Gly Ser Gly Gly Ser Gly Ser Gly Gly Glu Lys
 565 570 575
 Pro Ser Gly Pro Val Pro Arg Ser Arg Leu Asp Pro Ala Lys Val Leu
 580 585 590
 Gly Thr Ala Leu Cys Pro Arg Ile His Glu Val Pro Leu Leu Glu Pro
 595 600 605
 Leu Val Cys Lys Lys Ile Ala Gln Glu Arg Leu Thr Val Leu Leu Phe
 610 615 620
 Leu Glu Asp Cys Ile Ile Thr Ala Cys Gln Glu Gly Leu Ile Cys Thr
 625 630 635 640
 Trp Ala Arg Pro Gly Lys Ala Gly Ile Ser Ser Gln Pro Gly Asn Ser
 645 650 655
 Pro Ser Gly Thr Val Val Gly Ser His Gly Tyr Ser Ala Pro Pro Thr
 660 665 670
 Pro Cys Pro Gln Pro Ser Ser His Asn Pro Ser Leu
 675 680 684

<210> 1015
 <211> 1191
 <212> PRT
 <213> Homo sapiens

<400> 1015
 Met Pro Arg Gly Val Phe Gln Gln Leu Ser Asn Leu Val Leu Gln Glu
 1 5 10 15
 Leu Asn Ala Asn Leu Ser Asn Leu Thr Ser Ala Phe Glu Lys Ala Thr
 20 25 30
 Ala Glu Lys Ile Lys Cys Gln Gln Glu Ala Asp Ala Thr Asn Arg Val
 35 40 45
 Ile Leu Leu Ala Asn Arg Leu Val Gly Gly Leu Ala Ser Glu Asn Ile
 50 55 60
 Arg Trp Ala Glu Ser Val Glu Asn Phe Arg Ser Gln Gly Val Thr Leu
 65 70 75 80
 Cys Gly Asp Val Leu Leu Ile Ser Ala Phe Val Ser Tyr Val Gly Tyr
 85 90 95
 Phe Thr Lys Lys Tyr Arg Asn Glu Leu Met Glu Lys Phe Trp Ile Pro
 100 105 110
 Tyr Ile His Asn Leu Lys Val Pro Ile Pro Ile Thr Asn Gly Leu Asp
 115 120 125
 Pro Leu Ser Leu Leu Thr Asp Asp Ala Asp Val Ala Thr Trp Asn Asn
 130 135 140
 Gln Gly Leu Pro Ser Asp Arg Met Ser Thr Glu Asn Ala Thr Ile Leu
 145 150 155 160
 Gly Asn Thr Glu Arg Trp Pro Leu Ile Val Asp Ala Gln Leu Gln Gly
 165 170 175
 Ile Lys Trp Ile Lys Asn Lys Tyr Arg Ser Glu Leu Lys Ala Ile Arg
 180 185 190
 Leu Gly Gln Lys Ser Tyr Leu Asp Val Ile Glu Gln Ala Thr Ser Glu
 195 200 205
 Gly Asp Thr Leu Leu Ile Glu Asn Ile Gly Glu Thr Val Asp Pro Ala
 210 215 220
 Leu Asp Pro Leu Leu Gly Arg Asn Thr Ile Lys Lys Gly Lys Tyr Ile
 225 230 235 240

Lys	Ile	Gly	Asp	Lys	Glu	Val	Gly	Val	Pro	Pro	Gln	Val	Pro	Pro	Asp
				245					250					255	
Pro	Thr	His	Gln	Val	Leu	Gln	Pro	Thr	Leu	Gln	Ala	Arg	Asp	Ala	Gly
			260					265					270		
Ser	Val	His	Leu	Ile	Asn	Phe	Leu	Val	Thr	Arg	Asp	Gly	Leu	Glu	Asp
		275					280					285			
Gln	Leu	Ala	Ala	Val	Val	Ala	Lys	Glu	Arg	Pro	Asp	Leu	Glu	Gln	
	290				295					300					
Leu	Lys	Ala	Asn	Leu	Thr	Lys	Ser	Gln	Asn	Glu	Phe	Lys	Ile	Val	Leu
305					310					315				320	
Lys	Glu	Leu	Glu	Asp	Ser	Leu	Leu	Ala	Arg	Leu	Ser	Ala	Ala	Ser	Gly
			325						330					335	
Asn	Phe	Leu	Gly	Asp	Thr	Thr	Leu	Val	Glu	Asn	Leu	Glu	Thr	Thr	Lys
			340					345					350		
His	Thr	Ala	Ser	Glu	Ile	Glu	Glu	Lys	Val	Val	Glu	Ala	Lys	Ile	Thr
		355					360					365			
Glu	Val	Lys	Ile	Asn	Glu	Ala	Arg	Glu	Asn	Tyr	Arg	Pro	Ala	Ala	Glu
	370					375					380				
Arg	Ala	Ser	Leu	Leu	Tyr	Phe	Ile	Leu	Asn	Asp	Leu	Asn	Lys	Ile	Asn
385					390					395				400	
Pro	Val	Tyr	Gln	Phe	Ser	Leu	Lys	Ala	Phe	Asn	Val	Val	Phe	Glu	Lys
			405						410					415	
Ala	Ile	Gln	Arg	Thr	Thr	Pro	Ala	Asn	Glu	Val	Lys	Gln	Arg	Val	Ile
			420					425					430		
Asn	Leu	Thr	Asp	Glu	Ile	Thr	Tyr	Ser	Val	Tyr	Met	Tyr	Thr	Ala	Arg
		435				440						445			
Gly	Leu	Phe	Glu	Arg	Asp	Lys	Leu	Ile	Phe	Leu	Ala	Gln	Val	Thr	Phe
	450					455					460				
Gln	Val	Leu	Ser	Met	Lys	Lys	Glu	Leu	Asn	Pro	Val	Glu	Leu	Asp	Phe
465					470					475				480	
Leu	Leu	Arg	Phe	Pro	Phe	Lys	Ala	Gly	Val	Val	Ser	Pro	Val	Asp	Phe
			485						490					495	
Leu	Gln	His	Gln	Gly	Trp	Gly	Gly	Ile	Lys	Ala	Leu	Ser	Glu	Met	Asp
		500						505					510		
Glu	Phe	Lys	Asn	Leu	Asp	Ser	Asp	Ile	Glu	Gly	Ser	Ala	Lys	Arg	Trp
	515						520					525			
Lys	Lys	Leu	Val	Glu	Ser	Glu	Ala	Pro	Glu	Lys	Glu	Ile	Phe	Pro	Lys
	530					535					540				
Glu	Trp	Lys	Asn	Lys	Thr	Ala	Leu	Gln	Lys	Leu	Cys	Met	Val	Arg	Cys
545					550					555				560	
Leu	Arg	Pro	Asp	Arg	Met	Thr	Tyr	Ala	Ile	Lys	Asn	Phe	Val	Glu	Glu
			565						570					575	
Lys	Met	Gly	Ser	Lys	Phe	Val	Glu	Gly	Arg	Ser	Val	Glu	Phe	Ser	Lys
		580						585					590		
Ser	Tyr	Glu	Glu	Ser	Ser	Pro	Ser	Thr	Ser	Ile	Phe	Phe	Ile	Leu	Ser
	595						600					605			
Pro	Gly	Val	Asp	Pro	Leu	Lys	Asp	Val	Glu	Ala	Leu	Gly	Lys	Lys	Leu
	610					615						620			
Gly	Phe	Thr	Ile	Asp	Asn	Gly	Lys	Leu	His	Asn	Val	Ser	Leu	Gly	Gln
625					630					635				640	
Gly	Gln	Glu	Val	Val	Ala	Glu	Asn	Ala	Leu	Asp	Val	Ala	Ala	Glu	Lys
			645						650					655	
Gly	His	Trp	Val	Ile	Leu	Gln	Asn	Ile	His	Leu	Val	Ala	Arg	Trp	Leu
		660						665					670		
Gly	Thr	Leu	Asp	Lys	Lys	Leu	Glu	Arg	Tyr	Ser	Thr	Gly	Ser	His	Glu
	675						680					685			
Asp	Tyr	Arg	Val	Phe	Ile	Ser	Ala	Glu	Pro	Ala	Pro	Ser	Pro	Glu	Thr
	690					695					700				
His	Ile	Ile	Pro	Gln	Gly	Ile	Leu	Glu	Asn	Ala	Ile	Lys	Ile	Thr	Asn
705					710					715				720	
Glu	Pro	Pro	Thr	Gly	Met	His	Ala	Asn	Leu	His	Lys	Ala	Leu	Asp	Leu
			725						730					735	
Phe	Thr	Gln	Asp	Thr	Leu	Glu	Met	Cys	Thr	Lys	Glu	Met	Glu	Phe	Lys
			740					745					750		

Cys Met Leu Phe Ala Leu Cys Tyr Phe His Ala Val Val Ala Glu Arg
 755 760 765
 Arg Lys Phe Gly Ala Gln Gly Trp Asn Arg Ser Tyr Pro Phe Asn Asn
 770 775 780
 Gly Asp Leu Thr Ile Ser Ile Asn Val Leu Tyr Asn Tyr Leu Glu Ala
 785 790 795 800
 Asn Pro Lys Val Pro Trp Asp Asp Leu Arg Tyr Leu Phe Gly Glu Ile
 805 810 815
 Met Tyr Gly Gly His Ile Thr Asp Asp Trp Asp Arg Arg Leu Cys Arg
 820 825 830
 Thr Tyr Leu Ala Glu Tyr Ile Arg Thr Glu Met Leu Glu Gly Asp Val
 835 840 845
 Leu Leu Ala Pro Gly Phe Gln Ile Pro Pro Asn Leu Asp Tyr Lys Gly
 850 855 860
 Tyr His Glu Tyr Ile Asp Glu Asn Leu Pro Pro Glu Ser Pro Tyr Leu
 865 870 875 880
 Tyr Gly Leu His Pro Asn Ala Glu Ile Gly Phe Leu Thr Val Thr Ser
 885 890 895
 Glu Lys Leu Phe Arg Thr Val Leu Glu Met Gln Pro Lys Glu Thr Asp
 900 905 910
 Ser Gly Ala Gly Thr Gly Val Ser Arg Glu Glu Lys Val Lys Ala Val
 915 920 925
 Leu Asp Asp Ile Leu Glu Lys Ile Pro Glu Thr Phe Asn Met Ala Glu
 930 935 940
 Ile Met Ala Lys Ala Ala Glu Lys Thr Pro Tyr Val Val Val Ala Phe
 945 950 955 960
 Gln Glu Cys Glu Arg Met Asn Ile Leu Thr Asn Glu Met Arg Arg Ser
 965 970 975
 Leu Lys Glu Leu Asn Leu Gly Leu Lys Gly Glu Leu Thr Ile Thr Thr
 980 985 990
 Asp Val Glu Asp Leu Ser Thr Ala Leu Phe Tyr Asp Thr Val Pro Asp
 995 1000 1005
 Thr Trp Val Ala Arg Ala Tyr Pro Ser Met Met Gly Leu Ala Ala Trp
 1010 1015 1020
 Tyr Ala Asp Leu Leu Leu Arg Ile Arg Glu Leu Glu Ala Trp Thr Thr
 1025 1030 1035 1040
 Asp Phe Ala Leu Pro Thr Thr Val Trp Leu Ala Gly Phe Phe Asn Pro
 1045 1050 1055
 Gln Ser Phe Leu Thr Ala Ile Met Gln Ser Met Ala Arg Lys Asn Glu
 1060 1065 1070
 Trp Pro Leu Asp Lys Met Cys Leu Ser Val Glu Val Thr Lys Lys Asn
 1075 1080 1085
 Arg Glu Asp Met Thr Ala Pro Pro Arg Glu Gly Ser Tyr Val Tyr Gly
 1090 1095 1100
 Leu Phe Met Glu Gly Ala Arg Trp Asp Thr Gln Thr Gly Val Ile Ala
 1105 1110 1115 1120
 Glu Ala Arg Leu Lys Glu Leu Thr Pro Ala Met Pro Val Ile Phe Ile
 1125 1130 1135
 Lys Ala Ile Pro Val Asp Arg Met Glu Thr Lys Asn Ile Tyr Glu Cys
 1140 1145 1150
 Pro Val Tyr Lys Thr Arg Ile Arg Gly Pro Thr Tyr Val Trp Thr Phe
 1155 1160 1165
 Asn Leu Lys Thr Lys Glu Lys Ala Ala Lys Trp Ile Leu Ala Ala Val
 1170 1175 1180
 Ala Leu Leu Leu Gln Val *
 1185 1190

<210> 1016

<211> 476

<212> PRT

<213> Homo sapiens

<400> 1016

Met	Glu	Thr	Pro	Gly	Ala	Ser	Ala	Ser	Ser	Leu	Leu	Leu	Pro	Ala	Ala	1	5	10	15
Ser	Arg	Pro	Pro	Arg	Lys	Arg	Glu	Ala	Gly	Glu	Ala	Gly	Ala	Ala	Thr	20	25	30	
Ser	Lys	Gln	Arg	Val	Leu	Asp	Glu	Glu	Tyr	Ile	Glu	Gly	Leu	Gln		35	40	45	
Thr	Val	Ile	Gln	Arg	Asp	Phe	Phe	Pro	Asp	Val	Glu	Lys	Leu	Gln	Ala	50	55	60	
Gln	Lys	Glu	Tyr	Leu	Glu	Ala	Glu	Glu	Asn	Gly	Asp	Leu	Glu	Arg	Met	65	70	75	80
Arg	Gln	Ile	Ala	Ile	Lys	Phe	Gly	Ser	Ala	Leu	Gly	Lys	Met	Ser	Arg	85	90	95	
Glu	Pro	Pro	Pro	Tyr	Val	Thr	Pro	Ala	Thr	Phe	Glu	Thr	Pro	Glu		100	105	110	
Val	His	Ala	Gly	Thr	Gly	Val	Val	Gly	Asn	Lys	Pro	Arg	Pro	Arg	Gly	115	120	125	
Arg	Gly	Leu	Glu	Asp	Gly	Glu	Ala	Gly	Glu	Glu	Glu	Lys	Glu	Pro		130	135	140	
Leu	Pro	Ser	Leu	Asp	Val	Phe	Leu	Ser	Arg	Tyr	Thr	Ser	Glu	Asp	Asn	145	150	155	160
Ala	Ser	Phe	Gln	Glu	Ile	Met	Glu	Val	Ala	Lys	Glu	Arg	Ser	Arg	Ala	165	170	175	
Arg	His	Ala	Trp	Leu	Tyr	Gln	Ala	Glu	Glu	Glu	Phe	Glu	Lys	Arg	Gln	180	185	190	
Lys	Asp	Asn	Leu	Glu	Leu	Pro	Ser	Ala	Glu	His	Gln	Ala	Ile	Glu	Ser	195	200	205	
Ser	Gln	Ala	Ser	Val	Glu	Thr	Trp	Lys	Tyr	Lys	Ala	Lys	Asn	Ser	Leu	210	215	220	
Met	Tyr	Tyr	Pro	Glu	Gly	Val	Pro	Asp	Glu	Glu	Gln	Leu	Phe	Lys	Lys	225	230	235	240
Pro	Arg	Gln	Val	Val	His	Lys	Asn	Thr	Arg	Phe	Leu	Arg	Asp	Pro	Phe	245	250	255	
Ser	Gln	Ala	Leu	Ser	Arg	Cys	Gln	Leu	Gln	Gln	Ala	Ala	Ala	Leu	Asn	260	265	270	
Ala	Gln	His	Lys	Gln	Gly	Lys	Val	Gly	Pro	Asp	Gly	Lys	Glu	Leu	Ile	275	280	285	
Pro	Gln	Glu	Ser	Pro	Arg	Val	Gly	Gly	Phe	Gly	Phe	Val	Ala	Thr	Pro	290	295	300	
Ser	Pro	Ala	Pro	Gly	Val	Asn	Glu	Ser	Pro	Met	Met	Thr	Trp	Gly	Glu	305	310	315	320
Val	Glu	Asn	Thr	Pro	Leu	Arg	Val	Glu	Gly	Ser	Glu	Thr	Pro	Tyr	Val	325	330	335	
Asp	Arg	Thr	Pro	Gly	Pro	Ala	Phe	Lys	Ile	Leu	Glu	Pro	Gly	Arg	Arg	340	345	350	
Glu	Arg	Leu	Gly	Leu	Lys	Met	Ala	Asn	Glu	Ala	Ala	Ala	Lys	Asn	Arg	355	360	365	
Ala	Lys	Lys	Gln	Glu	Ala	Leu	Arg	Arg	Val	Thr	Glu	Asn	Leu	Ala	Ser	370	375	380	
Leu	Thr	Pro	Lys	Gly	Leu	Ser	Pro	Ala	Met	Ser	Pro	Ala	Leu	Gln	Arg	385	390	395	400
Leu	Val	Ser	Arg	Thr	Ala	Ser	Lys	Tyr	Thr	Asp	Arg	Ala	Leu	Arg	Ala	405	410	415	
Ser	Tyr	Thr	Pro	Ser	Pro	Ala	Arg	Ser	Thr	His	Leu	Lys	Thr	Pro	Ala	420	425	430	
Ser	Gly	Leu	Gln	Thr	Pro	Thr	Ser	Thr	Pro	Ala	Pro	Gly	Ser	Ala	Thr	435	440	445	
Arg	Thr	Pro	Leu	Thr	Gln	Asp	Pro	Ala	Ser	Ile	Thr	Asp	Asn	Leu	Leu	450	455	460	
Gln	Leu	Pro	Ala	Arg	Arg	Lys	Ala	Ser	Asp	Phe	Phe					465	470	475	476

<210> 1017
 <211> 527
 <212> PRT
 <213> Homo sapiens

<400> 1017
 Met Ala Ser Asn Asp Tyr Thr Gln Gln Ala Thr Gln Ser Tyr Gly Ala
 1 5 10 15
 Tyr Pro Thr Gln Pro Gly Gln Gly Tyr Ser Gln Gln Ser Ser Gln Pro
 20 25 30
 Tyr Gly Gln Gln Ser Tyr Ser Gly Tyr Ser Gln Ser Thr Asp Thr Ser
 35 40 45
 Gly Tyr Gly Gln Ser Ser Tyr Ser Ser Tyr Gly Gln Ser Gln Asn Thr
 50 55 60
 Gly Tyr Gly Thr Gln Ser Thr Pro Gln Gly Tyr Gly Ser Thr Gly Gly
 65 70 75 80
 Tyr Gly Ser Ser Gln Ser Ser Gln Ser Ser Tyr Gly Gln Gln Ser Ser
 85 90 95
 Tyr Pro Gly Tyr Gly Gln Gln Pro Ala Pro Ser Ser Thr Ser Gly Ser
 100 105 110
 Tyr Gly Ser Ser Ser Gln Ser Ser Ser Tyr Gly Gln Pro Gln Ser Gly
 115 120 125
 Ser Tyr Ser Gln Gln Pro Ser Tyr Gly Gly Gln Gln Gln Ser Tyr Gly
 130 135 140
 Gln Gln Gln Ser Tyr Asn Pro Pro Gln Gly Tyr Gly Gln Gln Asn Gln
 145 150 155 160
 Tyr Asn Ser Ser Ser Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Asn
 165 170 175
 Tyr Gly Gln Asp Gln Ser Ser Met Ser Ser Gly Gly Gly Ser Gly Gly
 180 185 190
 Gly Tyr Gly Asn Gln Asp Gln Ser Gly Gly Gly Gly Ser Gly Gly Tyr
 195 200 205
 Gly Gln Gln Asp Arg Gly Gly Arg Gly Arg Gly Ser Gly Gly Gly
 210 215 220
 Gly Gly Gly Gly Gly Gly Gly Tyr Asn Arg Ser Ser Gly Gly Tyr Glu
 225 230 235 240
 Pro Arg Gly Arg Gly Gly Gly Arg Gly Gly Arg Gly Gly Met Gly Gly
 245 250 255
 Ser Asp Arg Gly Gly Phe Asn Lys Phe Gly Gly Pro Arg Asp Gln Gly
 260 265 270
 Ser Arg His Asp Ser Glu Gln Asp Asn Ser Asp Asn Asn Thr Ile Phe
 275 280 285
 Val Gln Gly Leu Gly Glu Asn Val Thr Ile Glu Ser Val Ala Asp Tyr
 290 295 300
 Phe Lys Gln Ile Gly Ile Ile Lys Thr Asn Lys Lys Thr Gly Gln Pro
 305 310 315 320
 Met Ile Asn Leu Tyr Thr Asp Arg Glu Thr Gly Lys Leu Lys Gly Glu
 325 330 335
 Ala Thr Val Ser Phe Asp Asp Pro Pro Ser Ala Lys Ala Ala Ile Asp
 340 345 350
 Trp Phe Asp Gly Lys Glu Phe Ser Gly Asn Pro Ile Lys Val Ser Phe
 355 360 365
 Ala Thr Arg Arg Ala Asp Phe Asn Arg Gly Gly Gly Asn Gly Arg Gly
 370 375 380
 Gly Arg Gly Arg Gly Gly Pro Met Gly Arg Gly Gly Tyr Gly Gly Gly
 385 390 395 400
 Gly Ser Gly Gly Gly Gly Arg Gly Gly Phe Pro Ser Gly Gly Gly Gly
 405 410 415
 Gly Gly Gly Gln Gln Arg Ala Gly Asp Trp Lys Cys Pro Asn Pro Thr
 420 425 430
 Cys Glu Asn Met Asn Phe Ser Trp Arg Asn Glu Cys Asn Gln Cys Lys
 435 440 445

Ala Pro Lys Pro Asp Gly Pro Gly Gly Gly Pro Gly Gly Ser His Met
 450 455 460
 Gly Gly Asn Tyr Gly Asp Asp Arg Arg Gly Gly Arg Gly Gly Tyr Asp
 465 470 475 480
 Arg Gly Gly Tyr Arg Gly Arg Gly Gly Asp Arg Gly Gly Phe Arg Gly
 485 490 495
 Gly Arg Gly Gly Gly Asp Arg Gly Gly Phe Gly Pro Gly Lys Met Asp
 500 505 510
 Ser Arg Gly Glu His Arg Gln Asp Arg Arg Glu Arg Pro Tyr *
 515 520 525 526

<210> 1018
 <211> 537
 <212> PRT
 <213> Homo sapiens

<400> 1018
 Met Ala Ser Asn Asp Tyr Thr Gln Gln Ala Thr Gln Ser Tyr Gly Ala
 1 5 10 15
 Tyr Pro Thr Gln Pro Gly Gln Gly Tyr Ser Gln Gln Ser Ser Gln Pro
 20 25 30
 Tyr Gly Gln Gln Ser Tyr Ser Gly Tyr Ser Gln Ser Thr Asp Thr Ser
 35 40 45
 Gly Tyr Gly Gln Ser Ser Tyr Ser Ser Tyr Gly Gln Ser Gln Asn Thr
 50 55 60
 Gly Tyr Gly Thr Gln Ser Thr Pro Gln Gly Tyr Gly Ser Thr Gly Gly
 65 70 75 80
 Tyr Gly Ser Ser Gln Ser Ser Gln Ser Ser Tyr Gly Gln Gln Ser Ser
 85 90 95
 Tyr Pro Gly Tyr Gly Gln Gln Pro Ala Pro Ser Ser Thr Ser Gly Ser
 100 105 110
 Tyr Gly Ser Ser Ser Gln Ser Ser Ser Tyr Gly Gln Pro Gln Ser Gly
 115 120 125
 Ser Tyr Ser Gln Gln Pro Ser Tyr Gly Gly Gln Gln Gln Ser Tyr Gly
 130 135 140
 Gln Gln Gln Ser Tyr Asn Pro Pro Gln Gly Tyr Gly Gln Gln Asn Gln
 145 150 155 160
 Tyr Asn Ser Ser Ser Gly Gly Gly Gly Gly Gly Gly Gly Gly Asn
 165 170 175
 Tyr Gly Gln Asp Gln Ser Ser Met Ser Ser Gly Gly Gln Asp Gln Ser
 180 185 190
 Ser Met Ser Ser Gly Gly Gly Ser Gly Gly Gly Tyr Gly Asn Gln Asp
 195 200 205
 Gln Ser Gly Gly Gly Gly Ser Gly Gly Tyr Gly Gln Gln Asp Arg Gly
 210 215 220
 Gly Arg Gly Arg Gly Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly
 225 230 235 240
 Gly Tyr Asn Arg Ser Ser Gly Gly Tyr Glu Pro Arg Gly Arg Gly Gly
 245 250 255
 Gly Arg Gly Gly Arg Gly Gly Met Gly Gly Ser Asp Arg Gly Gly Phe
 260 265 270
 Asn Lys Phe Gly Gly Pro Arg Asp Gln Gly Ser Arg His Asp Ser Glu
 275 280 285
 Gln Asp Asn Ser Asp Asn Asn Thr Ile Phe Val Gln Gly Leu Gly Glu
 290 295 300
 Asn Val Thr Ile Glu Ser Val Ala Asp Tyr Phe Lys Gln Ile Gly Ile
 305 310 315 320
 Ile Lys Thr Asn Lys Lys Thr Gly Gln Pro Met Ile Asn Leu Tyr Thr
 325 330 335
 Asp Arg Glu Thr Gly Lys Leu Lys Gly Glu Ala Thr Val Ser Phe Asp
 340 345 350

```

Asp Pro Pro Ser Ala Lys Ala Ala Ile Asp Trp Phe Asp Gly Lys Glu
      355                      360          365
Phe Ser Gly Asn Pro Ile Lys Val Ser Phe Ala Thr Arg Arg Ala Asp
      370                      375          380
Phe Asn Arg Gly Gly Gly Asn Gly Arg Gly Gly Arg Gly Arg Gly Gly
385                      390          395          400
Pro Met Gly Arg Gly Gly Tyr Gly Gly Gly Gly Ser Gly Gly Gly Gly
      405                      410          415
Arg Gly Gly Phe Pro Ser Gly Gly Gly Gly Gly Gly Gly Gln Gln Arg
      420                      425          430
Ala Gly Asp Trp Lys Cys Pro Asn Pro Thr Cys Glu Asn Met Asn Phe
      435                      440          445
Ser Trp Arg Asn Glu Cys Asn Gln Cys Lys Ala Pro Lys Pro Asp Gly
      450                      455          460
Pro Gly Gly Gly Pro Gly Gly Ser His Met Gly Gly Asn Tyr Gly Asp
465                      470          475          480
Asp Arg Arg Gly Gly Arg Gly Gly Tyr Asp Arg Gly Gly Tyr Arg Gly
      485                      490          495
Arg Gly Gly Asp Arg Gly Gly Phe Arg Gly Gly Arg Gly Gly Gly Asp
      500                      505          510
Arg Gly Gly Phe Gly Pro Gly Lys Met Asp Ser Arg Gly Glu His Arg
      515                      520          525
Gln Asp Arg Arg Glu Arg Pro Tyr *
      530                      535 536

```

```

<210> 1019
<211> 129
<212> PRT
<213> Homo sapiens

```

```

<400> 1019
Met Leu Trp Ala Gly Ala His Gln His Gly Arg Asn Trp Arg Lys Arg
 1                      5                      10          15
Glu Thr Ser Pro Gly Thr Gln Gly Pro Leu Pro Pro Val Pro Arg Ala
      20                      25          30
Arg Pro Ala Leu Met Ala Thr His Ala Ile Ala Pro Thr Leu Ser Trp
      35                      40          45
Ala Ile Pro Arg Gln Gln Cys Ser Pro Gln Pro Gly Arg Leu Asn Ala
      50                      55          60
Leu Pro Pro Asp Arg Cys Ser Gly Pro His Phe Gly Asp Arg Ala Pro
      65                      70          75          80
Glu Ser Cys Phe Pro Gly Ala Cys Ser Val Ser Gly Ala Cys Ala Phe
      85                      90          95
Lys Gly Thr Arg Pro Ala Cys Pro Pro Gln Glu Pro Ser Leu Arg Ser
      100                     105          110
Ser Arg Asn Arg Leu Arg Glu Gly Gln Thr Phe Gly Arg Met Glu Ile
      115                     120          125          128
*
```

```

<210> 1020
<211> 338
<212> PRT
<213> Homo sapiens

```

```

<400> 1020
Met Gly Asn Asp Ser Val Ser Tyr Glu Tyr Gly Asp Tyr Ser Asp Leu
 1                      5                      10          15

```

Ser Asp Arg Pro Val Asp Cys Leu Asp Gly Ala Cys Leu Ala Ile Asp
 20 25 30
 Pro Leu Arg Val Ala Pro Leu Pro Leu Tyr Ala Ala Ile Phe Leu Val
 35 40 45
 Gly Val Pro Gly Asn Ala Met Val Ala Trp Val Ala Gly Lys Val Ala
 50 55 60
 Arg Arg Arg Val Gly Ala Thr Trp Leu Leu His Leu Ala Val Ala Asp
 65 70 75 80
 Leu Leu Cys Cys Leu Ser Leu Pro Ile Leu Ala Val Pro Ile Ala Arg
 85 90 95
 Gly Gly His Trp Pro Tyr Gly Ala Val Gly Cys Arg Ala Leu Pro Ser
 100 105 110
 Ile Ile Leu Leu Thr Met Tyr Ala Ser Val Leu Leu Leu Ala Ala Leu
 115 120 125
 Ser Ala Asp Leu Cys Phe Leu Ala Leu Gly Pro Ala Trp Trp Ser Thr
 130 135 140
 Val Gln Arg Ala Cys Gly Val Gln Val Ala Cys Gly Ala Ala Trp Thr
 145 150 155 160
 Leu Ala Leu Leu Leu Thr Val Pro Ser Ala Ile Tyr Arg Arg Leu His
 165 170 175
 Gln Glu His Phe Pro Ala Arg Leu Gln Cys Val Val Asp Tyr Gly Gly
 180 185 190
 Ser Ser Ser Thr Glu Asn Ala Val Thr Ala Ile Arg Phe Leu Phe Gly
 195 200 205
 Phe Leu Gly Pro Leu Val Ala Val Ala Ser Cys His Ser Ala Leu Leu
 210 215 220
 Cys Trp Ala Ala Arg Arg Cys Arg Pro Leu Gly Thr Ala Ile Val Val
 225 230 235 240
 Gly Phe Phe Val Cys Trp Ala Pro Tyr His Leu Leu Gly Leu Val Leu
 245 250 255
 Thr Val Ala Ala Pro Asn Ser Ala Leu Leu Ala Arg Ala Leu Arg Ala
 260 265 270
 Glu Pro Leu Ile Val Gly Leu Ala Leu Ala His Ser Cys Leu Asn Pro
 275 280 285
 Met Leu Phe Leu Tyr Phe Gly Arg Ala Gln Leu Arg Arg Ser Leu Pro
 290 295 300
 Ala Ala Cys His Trp Ala Leu Arg Glu Ser Gln Gly Gln Asp Glu Ser
 305 310 315 320
 Val Asp Ser Lys Lys Ser Thr Ser His Asp Leu Val Ser Glu Met Glu
 325 330 335
 Val *
 337

<210> 1021
 <211> 1195
 <212> PRT
 <213> Homo sapiens

<400> 1021
 Met Glu Thr Arg Arg Arg Leu Glu Gln Glu Arg Ala Thr Met Gln Met
 1 5 10 15
 Thr Pro Gly Glu Phe Arg Arg Pro Arg Leu Ala Ser Phe Gly Gly Met
 20 25 30
 Gly Thr Thr Ser Ser Leu Pro Ser Phe Val Gly Ser Gly Asn His Asn
 35 40 45
 Pro Ala Lys His Gln Leu Gln Asn Gly Tyr Gln Gly Asn Gly Asp Tyr
 50 55 60
 Gly Ser Tyr Ala Pro Ala Ala Pro Thr Thr Ser Ser Met Gly Ser Ser
 65 70 75 80
 Ile Arg His Ser Pro Leu Ser Ser Gly Ile Ser Thr Pro Val Thr Asn
 85 90 95

Val	Ser	Pro	Met	His	Leu	Gln	His	Ile	Arg	Glu	Gln	Met	Ala	Ile	Ala	100	105	110
Leu	Lys	Arg	Leu	Lys	Glu	Leu	Glu	Glu	Gln	Val	Arg	Thr	Ile	Pro	Val	115	120	125
Leu	Gln	Val	Lys	Ile	Ser	Val	Leu	Gln	Glu	Glu	Lys	Arg	Gln	Leu	Val	130	135	140
Ser	Gln	Leu	Lys	Asn	Gln	Arg	Ala	Ala	Ser	Gln	Ile	Asn	Val	Cys	Gly	145	150	155
Val	Arg	Lys	Arg	Ser	Tyr	Ser	Ala	Gly	Asn	Ala	Ser	Gln	Leu	Glu	Gln	165	170	175
Leu	Ser	Arg	Ala	Arg	Arg	Ser	Gly	Gly	Glu	Leu	Tyr	Ile	Asp	Tyr	Glu	180	185	190
Glu	Glu	Glu	Met	Glu	Thr	Val	Glu	Gln	Ser	Thr	Gln	Arg	Ile	Lys	Glu	195	200	205
Phe	Arg	Gln	Leu	Thr	Ala	Asp	Met	Gln	Ala	Leu	Glu	Gln	Lys	Ile	Gln	210	215	220
Asp	Ser	Ser	Cys	Glu	Ala	Ser	Ser	Glu	Leu	Arg	Glu	Asn	Gly	Glu	Cys	225	230	235
Arg	Ser	Val	Ala	Val	Gly	Ala	Glu	Glu	Asn	Met	Asn	Asp	Ile	Val	Val	245	250	255
Tyr	His	Arg	Gly	Ser	Arg	Ser	Cys	Lys	Asp	Ala	Ala	Val	Gly	Thr	Leu	260	265	270
Val	Glu	Met	Arg	Asn	Cys	Gly	Val	Ser	Val	Thr	Glu	Ala	Met	Leu	Gly	275	280	285
Val	Met	Thr	Glu	Ala	Asp	Lys	Glu	Ile	Glu	Leu	Gln	Gln	Gln	Thr	Ile	290	295	300
Glu	Ser	Leu	Lys	Glu	Lys	Ile	Tyr	Arg	Leu	Glu	Val	Gln	Leu	Arg	Glu	305	310	315
Thr	Thr	His	Asp	Arg	Glu	Met	Thr	Lys	Leu	Lys	Gln	Glu	Leu	Gln	Ala	325	330	335
Ala	Gly	Ser	Arg	Lys	Lys	Val	Asp	Lys	Ala	Thr	Met	Ala	Gln	Pro	Leu	340	345	350
Val	Phe	Ser	Lys	Val	Val	Glu	Ala	Val	Val	Gln	Thr	Arg	Asp	Gln	Met	355	360	365
Val	Gly	Ser	His	Met	Asp	Leu	Val	Asp	Thr	Cys	Val	Gly	Thr	Ser	Val	370	375	380
Glu	Thr	Asn	Ser	Val	Gly	Ile	Ser	Cys	Gln	Pro	Glu	Cys	Lys	Asn	Lys	385	390	395
Val	Val	Gly	Pro	Glu	Leu	Pro	Met	Asn	Trp	Trp	Ile	Val	Lys	Glu	Arg	405	410	415
Val	Glu	Met	His	Asp	Arg	Cys	Ala	Gly	Arg	Ser	Val	Glu	Met	Cys	Asp	420	425	430
Lys	Ser	Val	Ser	Val	Glu	Val	Ser	Val	Cys	Glu	Thr	Gly	Ser	Asn	Thr	435	440	445
Glu	Glu	Ser	Val	Asn	Asp	Leu	Thr	Leu	Leu	Lys	Thr	Asn	Leu	Asn	Leu	450	455	460
Lys	Glu	Val	Arg	Ser	Ile	Gly	Cys	Gly	Asp	Cys	Ser	Val	Asp	Val	Thr	465	470	475
Val	Cys	Ser	Pro	Lys	Glu	Cys	Ala	Ser	Arg	Gly	Val	Asn	Thr	Glu	Ala	485	490	495
Val	Ser	Gln	Val	Glu	Ala	Ala	Val	Met	Ala	Val	Pro	Arg	Thr	Ala	Asp	500	505	510
Gln	Asp	Thr	Ser	Thr	Asp	Leu	Glu	Gln	Val	His	Gln	Phe	Thr	Asn	Thr	515	520	525
Glu	Thr	Ala	Thr	Leu	Ile	Glu	Ser	Cys	Thr	Asn	Thr	Cys	Leu	Ser	Thr	530	535	540
Leu	Asp	Lys	Gln	Thr	Ser	Thr	Gln	Thr	Val	Glu	Thr	Arg	Thr	Val	Ala	545	550	555
Val	Gly	Glu	Gly	Arg	Val	Lys	Asp	Ile	Asn	Ser	Ser	Thr	Lys	Thr	Arg	565	570	575
Ser	Ile	Gly	Val	Gly	Thr	Leu	Leu	Ser	Gly	His	Ser	Gly	Phe	Asp	Arg	580	585	590
Pro	Ser	Ala	Val	Lys	Thr	Lys	Glu	Ser	Gly	Val	Gly	Gln	Ile	Asn	Ile	595	600	605

Asn	Asp	Asn	Tyr	Leu	Val	Gly	Leu	Lys	Met	Arg	Thr	Ile	Ala	Cys	Gly
610						615					620				
Pro	Pro	Gln	Leu	Thr	Val	Gly	Leu	Thr	Ala	Ser	Arg	Arg	Ser	Val	Gly
625					630					635					640
Val	Gly	Asp	Asp	Pro	Val	Gly	Glu	Ser	Leu	Glu	Asn	Pro	Gln	Pro	Gln
				645					650					655	
Ala	Pro	Leu	Gly	Met	Met	Thr	Gly	Leu	Asp	His	Tyr	Ile	Glu	Arg	Ile
			660					665					670		
Gln	Lys	Leu	Leu	Ala	Glu	Gln	Gln	Thr	Leu	Leu	Ala	Glu	Asn	Tyr	Ser
			675				680					685			
Glu	Leu	Ala	Glu	Ala	Phe	Gly	Glu	Pro	His	Ser	Gln	Met	Gly	Ser	Leu
			690			695					700				
Asn	Ser	Gln	Leu	Ile	Ser	Thr	Leu	Ser	Ser	Ile	Asn	Ser	Val	Met	Lys
705					710					715					720
Ser	Ala	Ser	Thr	Glu	Glu	Leu	Arg	Asn	Pro	Asp	Phe	Gln	Lys	Thr	Ser
				725					730					735	
Leu	Gly	Lys	Ile	Thr	Gly	Asn	Tyr	Leu	Gly	Tyr	Thr	Cys	Lys	Cys	Gly
			740				745						750		
Gly	Leu	Gln	Ser	Gly	Ser	Pro	Leu	Ser	Ser	Gln	Thr	Ser	Gln	Pro	Glu
			755				760					765			
Gln	Glu	Val	Gly	Thr	Ser	Glu	Gly	Lys	Pro	Ile	Ser	Ser	Leu	Asp	Ala
			770				775				780				
Phe	Pro	Thr	Gln	Glu	Gly	Thr	Leu	Ser	Pro	Val	Asn	Leu	Thr	Asp	Asp
785					790					795					800
Gln	Ile	Ala	Ala	Gly	Leu	Tyr	Ala	Cys	Thr	Asn	Asn	Glu	Ser	Thr	Leu
				805					810					815	
Lys	Ser	Ile	Met	Lys	Lys	Lys	Asp	Gly	Asn	Lys	Asp	Ser	Asn	Gly	Ala
			820				825						830		
Lys	Lys	Asn	Leu	Gln	Phe	Val	Gly	Ile	Asn	Gly	Gly	Tyr	Glu	Thr	Thr
			835				840					845			
Ser	Ser	Asp	Asp	Ser	Ser	Ser	Asp	Glu	Ser	Ser	Ser	Ser	Glu	Ser	Asp
			850			855					860				
Asp	Glu	Cys	Asp	Val	Ile	Glu	Tyr	Pro	Leu	Glu	Glu	Glu	Glu	Glu	Glu
865					870					875					880
Glu	Asp	Glu	Asp	Thr	Arg	Gly	Met	Ala	Glu	Gly	His	His	Ala	Val	Asn
				885					890					895	
Ile	Glu	Gly	Leu	Lys	Ser	Ala	Arg	Val	Glu	Asp	Glu	Met	Gln	Val	Gln
			900				905						910		
Glu	Cys	Glu	Pro	Glu	Lys	Val	Glu	Ile	Arg	Glu	Arg	Tyr	Glu	Leu	Ser
			915				920					925			
Glu	Lys	Met	Leu	Ser	Ala	Cys	Asn	Leu	Leu	Lys	Asn	Thr	Ile	Asn	Asp
			930				935				940				
Pro	Lys	Ala	Leu	Thr	Ser	Lys	Asp	Met	Arg	Phe	Cys	Leu	Asn	Thr	Leu
945					950					955					960
Gln	His	Glu	Trp	Phe	Arg	Val	Ser	Ser	Gln	Lys	Ser	Ala	Ile	Pro	Ala
				965					970					975	
Met	Val	Gly	Asp	Tyr	Ile	Ala	Ala	Phe	Glu	Ala	Ile	Ser	Pro	Asp	Val
			980					985					990		
Leu	Arg	Tyr	Val	Ile	Asn	Leu	Ala	Asp	Gly	Asn	Gly	Asn	Thr	Ala	Leu
			995				1000					1005			
His	Tyr	Ser	Val	Ser	His	Ser	Asn	Phe	Glu	Ile	Val	Lys	Leu	Leu	Leu
			1010				1015				1020				
Asp	Ala	Asp	Val	Cys	Asn	Val	Asp	His	Gln	Asn	Lys	Ala	Gly	Tyr	Thr
1025					1030					1035					1040
Pro	Ile	Met	Leu	Ala	Ala	Leu	Ala	Ala	Val	Glu	Ala	Glu	Lys	Asp	Met
				1045					1050				1055		
Arg	Ile	Val	Glu	Glu	Leu	Phe	Gly	Cys	Gly	Asp	Val	Asn	Ala	Lys	Ala
			1060				1065					1070			
Ser	Gln	Ala	Gly	Gln	Thr	Ala	Leu	Met	Leu	Ala	Val	Ser	His	Gly	Arg
			1075				1080					1085			
Ile	Asp	Met	Val	Lys	Gly	Leu	Leu	Ala	Cys	Gly	Ala	Asp	Val	Asn	Ile
			1090			1095				1100					
Gln	Asp	Asp	Glu	Gly	Ser	Thr	Ala	Leu	Met	Cys	Ala	Ser	Glu	His	Gly
1105					1110					1115					1120

His Val Glu Ile Val Lys Leu Leu Leu Ala Gln Pro Gly Cys Asn Gly
 1125 1130 1135
 His Leu Glu Asp Asn Asp Gly Ser Thr Ala Leu Ser Ile Ala Leu Glu
 1140 1145 1150
 Ala Gly His Lys Asp Ile Ala Val Leu Leu Tyr Ala His Val Asn Phe
 1155 1160 1165
 Ala Lys Ala Gln Ser Pro Gly Thr Pro Arg Leu Gly Arg Lys Thr Ser
 1170 1175 1180
 Pro Gly Pro Thr His Arg Gly Ser Phe Asp *
 1185 1190 1194

<210> 1022
 <211> 366
 <212> PRT
 <213> Homo sapiens

<400> 1022
 Met Gly Arg Lys Lys Ile Gln Ile Ser Arg Ile Leu Asp Gln Arg Asn
 1 5 10 15
 Arg Gln Val Thr Phe Thr Lys Arg Lys Phe Gly Leu Met Lys Lys Ala
 20 25 30
 Tyr Glu Leu Ser Val Leu Cys Asp Cys Glu Ile Ala Leu Ile Ile Phe
 35 40 45
 Asn Ser Ala Asn Arg Leu Phe Gln Tyr Ala Ser Thr Asp Met Asp Arg
 50 55 60
 Val Leu Leu Lys Tyr Thr Glu Tyr Ser Glu Pro His Glu Ser Arg Thr
 65 70 75 80
 Asn Thr Asp Ile Leu Glu Thr Leu Lys Arg Arg Gly Ile Gly Leu Asp
 85 90 95
 Gly Pro Glu Leu Glu Pro Asp Glu Gly Pro Glu Glu Pro Gly Glu Lys
 100 105 110
 Phe Arg Arg Leu Ala Gly Glu Gly Asp Pro Ala Leu Pro Arg Pro
 115 120 125
 Arg Leu Tyr Pro Ala Ala Pro Ala Met Pro Ser Pro Asp Val Val Tyr
 130 135 140
 Gly Ala Leu Pro Pro Pro Gly Cys Asp Pro Ser Gly Leu Gly Glu Ala
 145 150 155 160
 Leu Pro Ala Gln Ser Arg Pro Ser Pro Phe Arg Pro Ala Ala Pro Lys
 165 170 175
 Ala Gly Pro Pro Gly Leu Gly His Pro Leu Phe Ser Pro Ser His Leu
 180 185 190
 Thr Ser Lys Thr Pro Pro Pro Leu Tyr Leu Pro Thr Glu Gly Arg Arg
 195 200 205
 Ser Asp Leu Pro Gly Gly Leu Ala Gly Pro Arg Gly Gly Leu Asn Thr
 210 215 220
 Ser Arg Ser Leu Tyr Ser Gly Leu Gln Asn Pro Cys Ser Thr Ala Thr
 225 230 235 240
 Pro Gly Pro Pro Leu Gly Ser Phe Pro Phe Leu Pro Gly Gly Pro Pro
 245 250 255
 Val Gly Ala Glu Ala Trp Ala Arg Arg Val Pro Gln Pro Ala Ala Pro
 260 265 270
 Pro Arg Arg Pro Pro Gln Ser Ala Ser Ser Leu Ser Ala Ser Leu Arg
 275 280 285
 Pro Pro Gly Ala Pro Ala Thr Phe Leu Arg Pro Ser Pro Ile Pro Cys
 290 295 300
 Ser Ser Pro Gly Pro Trp Gln Ser Leu Cys Gly Leu Gly Pro Pro Cys
 305 310 315 320
 Ala Gly Cys Pro Trp Pro Thr Ala Gly Pro Gly Arg Arg Ser Pro Gly
 325 330 335
 Gly Thr Ser Pro Glu Arg Ser Pro Gly Thr Ala Arg Ala Arg Gly Asp
 340 345 350

Pro Thr Ser Leu Gln Ala Ser Ser Glu Lys Thr Gln Gln *
 355 360 365

<210> 1023
 <211> 373
 <212> PRT
 <213> Homo sapiens

<400> 1023
 Met Ser Leu Arg Cys Gly Asp Ala Ala Arg Thr Leu Gly Pro Arg Val
 1 5 10 15
 Phe Gly Arg Tyr Phe Cys Ser Pro Val Arg Pro Leu Ser Ser Leu Pro
 20 25 30
 Asp Lys Lys Lys Glu Leu Leu Gln Asn Gly Pro Asp Leu Gln Asp Phe
 35 40 45
 Val Ser Gly Asp Leu Ala Asp Arg Ser Thr Trp Asp Glu Tyr Lys Gly
 50 55 60
 Asn Leu Lys Arg Gln Lys Gly Glu Arg Leu Arg Leu Pro Pro Trp Leu
 65 70 75 80
 Lys Thr Glu Ile Pro Met Gly Lys Asn Tyr Asn Lys Leu Lys Asn Thr
 85 90 95
 Leu Arg Asn Leu Asn Leu His Thr Val Cys Glu Glu Ala Arg Cys Pro
 100 105 110
 Asn Ile Gly Glu Cys Trp Gly Gly Gly Glu Tyr Ala Thr Ala Thr Ala
 115 120 125
 Thr Ile Met Leu Met Gly Asp Thr Cys Thr Arg Gly Cys Arg Phe Cys
 130 135 140
 Ser Val Lys Thr Ala Arg Asn Pro Pro Pro Leu Asp Ala Ser Glu Pro
 145 150 155 160
 Tyr Asn Thr Ala Lys Ala Ile Ala Glu Trp Gly Leu Asp Tyr Val Val
 165 170 175
 Leu Thr Ser Val Asp Arg Asp Asp Met Pro Asp Gly Gly Ala Glu His
 180 185 190
 Ile Ala Lys Thr Val Ser Tyr Leu Lys Glu Arg Asn Pro Lys Ile Leu
 195 200 205
 Val Glu Cys Leu Thr Pro Asp Phe Arg Gly Asp Leu Lys Ala Ile Glu
 210 215 220
 Lys Val Ala Leu Ser Gly Leu Asp Val Tyr Ala His Asn Val Glu Thr
 225 230 235 240
 Val Pro Glu Leu Gln Ser Lys Val Arg Asp Pro Arg Ala Asn Phe Asp
 245 250 255
 Gln Ser Leu Arg Val Leu Lys His Ala Lys Lys Val Gln Pro Asp Val
 260 265 270
 Ile Ser Lys Thr Ser Ile Met Leu Gly Leu Gly Glu Asn Asp Glu Gln
 275 280 285
 Val Tyr Ala Thr Met Lys Ala Leu Arg Glu Ala Asp Val Asp Cys Leu
 290 295 300
 Thr Leu Gly Gln Tyr Met Gln Pro Thr Arg Arg His Leu Lys Val Glu
 305 310 315 320
 Glu Tyr Ile Thr Pro Glu Lys Phe Lys Tyr Trp Glu Lys Val Gly Asn
 325 330 335
 Glu Leu Gly Phe His Tyr Thr Ala Ser Gly Pro Leu Val Arg Ser Ser
 340 345 350
 Tyr Lys Ala Gly Glu Phe Phe Leu Lys Asn Leu Val Ala Lys Arg Lys
 355 360 365
 Thr Lys Asp Leu *
 370 372

<210> 1024

<211> 529
 <212> PRT
 <213> Homo sapiens

<400> 1024
 Met Gln Gly Pro Trp Val Leu Leu Leu Leu Gly Leu Arg Leu Gln Leu
 1 5 10 15
 Ser Leu Gly Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn
 20 25 30
 Arg Gln Ala Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile
 35 40 45
 Gln Lys Val Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly
 50 55 60
 Val Pro Thr Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly
 65 70 75 80
 Lys Leu Gly Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu
 85 90 95
 Ala Leu Ser Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala
 100 105 110
 Ala Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr
 115 120 125
 Ile Gly Leu Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg
 130 135 140
 Gly Asn Glu Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys
 145 150 155 160
 Ser Val Gly Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala
 165 170 175
 Gly Thr Tyr Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp
 180 185 190
 Met Pro Ala Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln
 195 200 205
 Leu Ile Ser Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys
 210 215 220
 Tyr Met Phe Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala
 225 230 235 240
 Ser Gln Asn Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp
 245 250 255
 Leu Ala Lys His Gln Gly Ala Trp Tyr Val Trp Asn Arg Thr Glu Leu
 260 265 270
 Met Gln Ala Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe
 275 280 285
 Glu Pro Gly Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp
 290 295 300
 Pro Ser Leu Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg
 305 310 315 320
 Asn Pro Arg Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His
 325 330 335
 Gly His His Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met
 340 345 350
 Phe Asp Asp Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp
 355 360 365
 Thr Leu Thr Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly
 370 375 380
 Gly Tyr Thr Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys
 385 390 395 400
 Ala Gln Asp Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro
 405 410 415
 Gly Tyr Val Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu
 420 425 430
 Ser Gly Ser Pro Asp Tyr Gln Gln Ala Ala Val Pro Leu Ser Ser
 435 440 445
 Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln
 450 455 460

Ala His Leu Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val
 465 470 475 480
 Met Ala Phe Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala
 485 490 495
 Pro Pro Ala Cys Thr Thr Asp Ala Ala His Pro Val Ala Ala Ser Leu
 500 505 510
 Pro Leu Leu Ala Gly Thr Leu Leu Leu Gly Ala Ser Ala Ala Pro
 515 520 525 528

*

<210> 1025
 <211> 219
 <212> PRT
 <213> Homo sapiens

<400> 1025
 Met Asn Arg Leu Phe Gly Lys Ala Lys Pro Lys Ala Pro Pro Pro Ser
 1 5 10 15
 Leu Thr Asp Cys Ile Gly Thr Val Asp Ser Arg Ala Glu Ser Ile Asp
 20 25 30
 Lys Lys Ile Ser Arg Leu Asp Ala Glu Leu Val Lys Tyr Lys Asp Gln
 35 40 45
 Ile Lys Lys Met Arg Glu Gly Pro Ala Lys Asn Met Val Lys Gln Lys
 50 55 60
 Ala Leu Arg Val Leu Lys Gln Lys Arg Met Tyr Glu Gln Gln Arg Asp
 65 70 75 80
 Asn Leu Ala Asn Ser His Ser Thr Trp Thr Ser His Tyr Thr Ile Gln
 85 90 95
 Ser Leu Lys Asp Thr Lys Thr Thr Val Asp Ala Met Lys Leu Gly Val
 100 105 110
 Lys Glu Met Lys Lys Ala Tyr Lys Gln Val Lys Ile Asp Gln Ile Glu
 115 120 125
 Asp Leu Gln Asp Gln Leu Glu Asp Met Met Glu Asp Ala Asn Glu Ile
 130 135 140
 Gln Glu Ala Leu Ser Arg Ser Tyr Gly Thr Pro Glu Leu Asp Glu Asp
 145 150 155 160
 Asp Leu Glu Ala Glu Leu Asp Ala Leu Gly Asp Glu Leu Leu Ala Asp
 165 170 175
 Glu Asp Ser Ser Tyr Leu Asp Glu Ala Ala Ser Ala Pro Ala Ile Pro
 180 185 190
 Glu Gly Val Pro Thr Asp Thr Lys Asn Lys Asp Gly Val Leu Val Asp
 195 200 205
 Glu Phe Gly Leu Pro Gln Ile Pro Ala Ser *
 210 215 218

<210> 1026
 <211> 489
 <212> PRT
 <213> Homo sapiens

<400> 1026
 Met Gln His Val Ser Ser Ser Gln Ser Ser Gln Arg His Val Gln Trp
 1 5 10 15
 Pro Gly Ala Cys Pro Gly Ala Gly Glu Gln Pro Ala Cys Ser Gln
 20 25 30
 Pro Ser Leu Pro Leu Thr Leu Ala Ser Pro Ser His Gln Leu Gln Gln
 35 40 45

Leu Met Val Arg Gly Gly Pro Ala Gly Gly Gln Asn Met Asn Val Asp
 50 55 60
 Leu Gln Gly Val Gly Pro Gly Leu Gln Gly Ser Pro Gln Val Thr Leu
 65 70 75 80
 Ala Pro Leu Pro Leu Pro Ser Pro Thr Ser Pro Gly Phe Gln Phe Ser
 85 90 95
 Ala Gln Pro Arg Arg Phe Glu His Gly Ser Pro Ser Tyr Ile Gln Val
 100 105 110
 Thr Ser Pro Leu Ser Gln Gln Val Gln Thr Gln Ser Pro Thr Gln Pro
 115 120 125
 Ser Pro Gly Pro Gly Gln Ala Leu Gln Asn Val Arg Ala Gly Ala Pro
 130 135 140
 Gly Pro Gly Leu Gly Leu Cys Ser Ser Ser Pro Thr Gly Asp Phe Val
 145 150 155 160
 Asp Ala Ser Val Leu Val Arg Gln Ile Ser Leu Ser Pro Ser Ser Gly
 165 170 175
 Gly His Phe Val Phe Gln Asp Gly Ser Gly Leu Thr Gln Ile Ala Gln
 180 185 190
 Gly Ala Gln Val Gln Leu Gln His Pro Gly Thr Pro Ile Thr Val Arg
 195 200 205
 Glu Arg Arg Pro Ser Gln Pro His Thr Gln Ser Gly Gly Thr Ile His
 210 215 220
 His Leu Gly Pro Gln Ser Pro Ala Ala Ala Gly Gly Ala Gly Leu Gln
 225 230 235 240
 Pro Leu Ala Ser Pro Ser His Ile Thr Thr Ala Asn Leu Pro Pro Gln
 245 250 255
 Ile Ser Ser Ile Ile Gln Gly Gln Leu Val Gln Gln Gln Val Leu
 260 265 270
 Gln Gly Pro Pro Leu Pro Arg Pro Leu Gly Phe Glu Arg Thr Pro Gly
 275 280 285
 Val Leu Leu Pro Gly Ala Gly Gly Ala Ala Gly Phe Gly Met Thr Ser
 290 295 300
 Pro Pro Pro Pro Thr Ser Pro Ser Arg Thr Ala Val Pro Pro Gly Leu
 305 310 315 320
 Ser Ser Leu Pro Leu Thr Ser Val Gly Asn Thr Gly Met Lys Lys Val
 325 330 335
 Pro Lys Lys Leu Glu Glu Ile Pro Pro Ala Ser Pro Glu Met Ala Gln
 340 345 350
 Met Arg Lys Gln Cys Leu Asp Tyr His His Gln Glu Met Gln Ala Leu
 355 360 365
 Lys Glu Val Phe Lys Glu Tyr Leu Ile Glu Leu Phe Phe Leu Gln His
 370 375 380
 Phe Gln Gly Asn Met Met Asp Phe Leu Ala Phe Lys Glu Arg Leu Tyr
 385 390 395 400
 Gly Pro Leu Gln Ala Tyr Leu Arg Gln Asn Asp Leu Asp Ile Glu Glu
 405 410 415
 Glu Glu Glu Glu His Phe Glu Val Ile Asn Asp Glu Val Lys Val Val
 420 425 430
 Ala Arg Lys His Gly Gln Pro Gly Thr Pro Val Ala Ile Ala Thr Gln
 435 440 445
 Leu Pro Pro Arg Thr Ser Ala Ala Phe Pro Ala Gln Gln Gln Pro Leu
 450 455 460
 Gln Val Leu Ser Asp Gly Ser Thr Val Gln Leu Pro Arg Leu Ser Ser
 465 470 475 480
 Leu Gly Phe Glu Asp Ser Met Cys *
 485 488

<210> 1027
 <211> 291
 <212> PRT
 <213> Homo sapiens

<400> 1027

```

Met His Pro Ile Asn Val Arg Arg Asp Pro Ser Ile Pro Ile Tyr Gly
 1           5           10           15
Leu Arg Gln Ser Ile Leu Leu Asn Thr Arg Leu Gln Asp Cys Tyr Val
          20           25           30
Asp Ser Pro Ala Leu Thr Asn Ile Trp Met Ala Arg Thr Cys Ala Lys
          35           40           45
Gln Asn Ile Asn Ala Pro Ala Pro Ala Thr Thr Ser Ser Trp Glu Val
          50           55           60
Val Arg Asn Pro Leu Ile Ala Ser Ser Phe Ser Leu Val Lys Leu Val
          65           70           75           80
Leu Arg Arg Gln Leu Lys Asn Lys Cys Cys Pro Pro Pro Cys Lys Phe
          85           90           95
Gly Glu Gly Lys Leu Ser Lys Arg Leu Lys His Lys Asp Asp Ser Val
          100          105          110
Met Lys Ala Thr Gln Gln Ala Arg Lys Arg Asn Phe Ile Ser Ser Lys
          115          120          125
Ser Lys Gln Pro Ala Gly His Arg Arg Pro Ala Gly Gly Ile Arg Glu
          130          135          140
Ser Lys Glu Ser Ser Lys Glu Lys Lys Leu Thr Val Arg Gln Asp Leu
145          150          155          160
Glu Asp Arg Tyr Ala Glu His Val Ala Ala Thr Gln Ala Leu Pro Gln
          165          170          175
Asp Ser Gly Thr Ala Ala Trp Lys Gly Arg Val Leu Leu Pro Glu Thr
          180          185          190
Gln Lys Arg Gln Gln Leu Ser Glu Asp Thr Leu Thr Ile His Gly Leu
          195          200          205
Pro Thr Glu Gly Tyr Gln Ala Leu Tyr His Ala Val Val Glu Pro Met
          210          215          220
Leu Trp Asn Pro Ser Gly Thr Pro Lys Arg Tyr Ser Leu Glu Leu Gly
225          230          235          240
Lys Ala Ile Lys Gln Lys Leu Trp Glu Ala Leu Cys Ser Gln Gly Ala
          245          250          255
Ile Ser Glu Gly Ala Gln Arg Asp Arg Phe Pro Gly Arg Lys Gln Pro
          260          265          270
Gly Val His Glu Glu Pro Val Leu Lys Lys Trp Pro Lys Leu Lys Ser
          275          280          285
Lys Lys *
          290

```

<210> 1028

<211> 548

<212> PRT

<213> Homo sapiens

<400> 1028

```

Met Glu Gly Glu Asp Thr Arg Asp Asp Ser Leu Tyr Ser Ile Leu Glu
 1           5           10           15
Glu Leu Trp Gln Asp Ala Glu Gln Ile Lys Arg Cys Gln Glu Lys His
          20           25           30
Asn Lys Leu Leu Ser Arg Thr Thr Phe Leu Asn Lys Lys Ile Leu Asn
          35           40           45
Thr Glu Trp Asp Tyr Glu Tyr Lys Asp Phe Gly Lys Phe Val His Pro
          50           55           60
Ser Pro Asn Leu Ile Leu Ser Gln Lys Arg Pro His Lys Arg Asp Ser
          65           70           75           80
Phe Gly Lys Ser Phe Lys His Asn Leu Asp Leu His Ile His Asn Lys
          85           90           95
Ser Asn Ala Ala Lys Asn Leu Asp Lys Thr Ile Gly His Gly Gln Val
          100          105          110

```

```
<210> 1029
<211> 578
<212> PRT
<213> Homo sapiens
```


<400> 1029

Met	Gly	Ser	Arg	His	Phe	Glu	Gly	Ile	Tyr	Asp	His	Val	Gly	His	Phe
1				5					10					15	
Gly	Arg	Phe	Gln	Arg	Val	Leu	Tyr	Phe	Ile	Cys	Ala	Phe	Gln	Asn	Ile
		20						25					30		
Ser	Cys	Gly	Ile	His	Tyr	Leu	Ala	Ser	Val	Phe	Met	Gly	Val	Thr	Pro
	35					40						45			
His	His	Val	Cys	Arg	Pro	Pro	Gly	Asn	Val	Ser	Gln	Val	Val	Phe	His
	50					55					60				
Asn	His	Ser	Asn	Trp	Ser	Leu	Glu	Asp	Thr	Gly	Ala	Leu	Leu	Ser	Ser
65				70						75				80	
Gly	Gln	Lys	Asp	Tyr	Val	Thr	Val	Gln	Leu	Gln	Asn	Gly	Glu	Ile	Trp
			85					90						95	
Glu	Leu	Ser	Arg	Cys	Ser	Arg	Asn	Lys	Arg	Glu	Asn	Thr	Ser	Ser	Leu
		100					105						110		
Gly	Tyr	Glu	Tyr	Thr	Gly	Ser	Lys	Lys	Glu	Phe	Pro	Cys	Val	Asp	Gly
	115					120						125			
Tyr	Ile	Tyr	Asp	Gln	Asn	Thr	Trp	Lys	Ser	Thr	Ala	Val	Thr	Gln	Trp
130					135						140				
Asn	Leu	Val	Cys	Asp	Arg	Lys	Trp	Leu	Ala	Met	Leu	Ile	Gln	Pro	Leu
145				150						155				160	
Phe	Met	Phe	Gly	Val	Leu	Leu	Gly	Ser	Val	Thr	Phe	Gly	Tyr	Phe	Ser
			165					170						175	
Asp	Arg	Leu	Gly	Arg	Arg	Val	Val	Leu	Trp	Ala	Thr	Ser	Ser	Ser	Met
		180						185					190		
Phe	Leu	Phe	Gly	Ile	Ala	Ala	Ala	Phe	Ala	Val	Asp	Tyr	Tyr	Thr	Phe
	195					200						205			
Met	Ala	Ala	Arg	Phe	Phe	Leu	Ala	Met	Val	Ala	Ser	Gly	Tyr	Leu	Val
210					215						220				
Val	Gly	Phe	Val	Tyr	Val	Met	Glu	Phe	Ile	Gly	Met	Lys	Ser	Arg	Thr
225					230					235				240	
Trp	Ala	Ser	Val	His	Leu	His	Ser	Phe	Phe	Ala	Val	Gly	Thr	Leu	Leu
			245					250						255	
Val	Ala	Leu	Thr	Gly	Tyr	Leu	Val	Arg	Thr	Trp	Trp	Leu	Tyr	Gln	Met
		260						265					270		
Ile	Leu	Ser	Thr	Val	Thr	Val	Pro	Phe	Ile	Leu	Cys	Cys	Trp	Val	Leu
	275						280					285			
Pro	Glu	Thr	Pro	Phe	Trp	Leu	Leu	Ser	Glu	Gly	Arg	Tyr	Glu	Glu	Ala
290					295						300				
Gln	Lys	Ile	Val	Asp	Ile	Met	Ala	Lys	Trp	Asn	Arg	Ala	Ser	Ser	Cys
305					310					315				320	
Lys	Leu	Ser	Glu	Leu	Leu	Ser	Leu	Asp	Leu	Gln	Gly	Pro	Val	Ser	Asn
			325					330						335	
Ser	Pro	Thr	Glu	Val	Gln	Lys	His	Asn	Leu	Ser	Tyr	Leu	Phe	Tyr	Asn
		340						345					350		
Trp	Ser	Ile	Thr	Lys	Arg	Thr	Leu	Thr	Val	Trp	Leu	Ile	Trp	Phe	Thr
	355						360					365			
Gly	Ser	Leu	Gly	Phe	Tyr	Ser	Phe	Ser	Leu	Asn	Ser	Val	Asn	Leu	Gly
370					375						380				
Gly	Asn	Glu	Tyr	Leu	Asn	Leu	Phe	Leu	Leu	Gly	Val	Val	Glu	Ile	Pro
385				390						395				400	
Ala	Tyr	Thr	Phe	Val	Cys	Ile	Ala	Met	Asp	Lys	Val	Gly	Arg	Arg	Thr
			405					410					415		
Val	Leu	Ala	Tyr	Ser	Leu	Phe	Cys	Ser	Ala	Leu	Ala	Cys	Gly	Val	Val
		420						425					430		
Met	Val	Ile	Pro	Gln	Lys	His	Tyr	Ile	Leu	Gly	Val	Val	Thr	Ala	Met
	435						440					445			
Val	Gly	Lys	Phe	Ala	Ile	Gly	Ala	Ala	Phe	Gly	Leu	Ile	Tyr	Leu	Tyr
450					455						460				
Thr	Ala	Glu	Leu	Tyr	Pro	Thr	Ile	Val	Arg	Ser	Leu	Ala	Val	Gly	Ser
465				470						475				480	
Gly	Ser	Met	Val	Cys	Arg	Leu	Ala	Ser	Ile	Leu	Ala	Pro	Phe	Ser	Val
			485					490						495	

Asp Leu Ser Ser Ile Trp Ile Phe Ile Pro Gln Leu Phe Val Gly Thr
 500 505 510
 Met Ala Leu Leu Ser Gly Val Leu Thr Leu Lys Leu Pro Glu Thr Leu
 515 520 525
 Gly Lys Arg Leu Ala Thr Thr Trp Glu Glu Ala Ala Lys Leu Glu Ser
 530 535 540
 Glu Asn Glu Ser Lys Ser Ser Lys Leu Leu Leu Thr Thr Asn Asn Ser
 545 550 555 560
 Gly Leu Glu Lys Thr Glu Ala Ile Thr Pro Arg Asp Ser Gly Leu Gly
 565 570 575
 Glu *
 577

<210> 1030
 <211> 364
 <212> PRT
 <213> Homo sapiens

<400> 1030
 Met Met Thr Pro Glu Val Leu Ala Glu Ala Tyr Gly Lys Lys Glu Trp
 1 5 10 15
 Lys His Phe Leu Ser Asp Thr Gly Met Ala Cys Arg Ser Gly Lys Tyr
 20 25 30
 Tyr Phe Tyr Asp Asn Tyr Phe Asp Leu Pro Gly Ala Leu Leu Cys Ala
 35 40 45
 Arg Val Val Asp Tyr Leu Thr Lys Leu Asn Asn Gly Gln Lys Thr Phe
 50 55 60
 Asp Phe Trp Lys Asp Ile Val Ala Ala Ile Gln His Asn Tyr Lys Met
 65 70 75 80
 Ser Ala Phe Lys Glu Asn Cys Gly Ile Tyr Phe Pro Glu Ile Lys Arg
 85 90 95
 Asp Pro Gly Arg Tyr Leu His Ser Cys Pro Glu Ser Val Lys Lys Trp
 100 105 110
 Leu Arg Gln Leu Lys Asn Ala Gly Lys Ile Leu Leu Leu Ile Thr Ser
 115 120 125
 Ser His Ser Asp Tyr Cys Arg Leu Leu Cys Glu Tyr Ile Leu Gly Asn
 130 135 140
 Asp Phe Thr Asp Leu Phe Asp Ile Val Ile Thr Asn Ala Leu Lys Pro
 145 150 155 160
 Gly Phe Phe Ser His Leu Pro Ser Gln Arg Pro Phe Arg Thr Leu Glu
 165 170 175
 Asn Asp Glu Glu Gln Glu Ala Leu Pro Ser Leu Asp Lys Pro Gly Trp
 180 185 190
 Tyr Ser Gln Gly Asn Ala Val His Leu Tyr Glu Leu Leu Lys Lys Met
 195 200 205
 Thr Gly Lys Pro Glu Pro Lys Val Val Tyr Phe Gly Asp Ser Met His
 210 215 220
 Ser Asp Ile Phe Pro Ala Arg His Tyr Ser Asn Trp Glu Thr Val Leu
 225 230 235 240
 Ile Leu Glu Glu Leu Arg Gly Asp Glu Gly Thr Arg Ser Gln Arg Pro
 245 250 255
 Glu Glu Ser Glu Pro Leu Glu Lys Lys Gly Lys Tyr Glu Gly Pro Lys
 260 265 270
 Ala Lys Pro Leu Asn Thr Ser Ser Lys Lys Trp Gly Ser Phe Phe Ile
 275 280 285
 Asp Ser Val Leu Gly Leu Glu Asn Thr Glu Asp Ser Leu Val Tyr Thr
 290 295 300
 Trp Ser Cys Lys Arg Ile Ser Thr Tyr Ser Thr Ile Ala Ile Pro Ser
 305 310 315 320
 Ile Glu Ala Ile Ala Glu Leu Pro Leu Asp Tyr Lys Phe Thr Arg Phe
 325 330 335

Ser Ser Ser Asn Ser Lys Thr Ala Gly Tyr Tyr Pro Asn Pro Pro Leu
 340 345 350
 Val Leu Ser Ser Asp Glu Thr Leu Ile Ser Lys *
 355 360 363

<210> 1031
 <211> 694
 <212> PRT
 <213> Homo sapiens

<400> 1031
 Met Thr Pro Gln Ser Leu Leu Gln Thr Thr Leu Phe Leu Leu Ser Leu
 1 5 10 15
 Leu Phe Leu Val Gln Gly Ala His Gly Arg Gly His Arg Glu Asp Phe
 20 25 30
 Arg Phe Cys Ser Gln Arg Asn Gln Thr His Arg Ser Ser Leu His Tyr
 35 40 45
 Lys Pro Thr Pro Asp Leu Arg Ile Ser Ile Glu Asn Ser Glu Glu Ala
 50 55 60
 Leu Thr Val His Ala Pro Phe Pro Ala Ala His Pro Ala Ser Arg Ser
 65 70 75 80
 Phe Pro Asp Pro Arg Gly Leu Tyr His Phe Cys Leu Tyr Trp Asn Arg
 85 90 95
 His Ala Gly Arg Leu His Leu Leu Tyr Gly Lys Arg Asp Phe Leu Leu
 100 105 110
 Ser Asp Lys Ala Ser Ser Leu Leu Cys Phe Gln His Gln Glu Glu Ser
 115 120 125
 Leu Ala Gln Gly Pro Pro Leu Leu Ala Thr Ser Val Thr Ser Trp Trp
 130 135 140
 Ser Pro Gln Asn Ile Ser Leu Pro Ser Ala Ala Ser Phe Thr Phe Ser
 145 150 155 160
 Phe His Ser Pro Pro His Thr Ala Ala His Asn Ala Ser Val Asp Met
 165 170 175
 Cys Glu Leu Lys Arg Asp Leu Gln Leu Leu Ser Gln Phe Leu Lys His
 180 185 190
 Pro Gln Lys Ala Ser Arg Arg Pro Ser Ala Ala Pro Ala Ser Gln Gln
 195 200 205
 Leu Gln Ser Leu Glu Ser Lys Leu Thr Ser Val Arg Phe Met Gly Asp
 210 215 220
 Met Val Ser Phe Glu Glu Asp Arg Ile Asn Ala Thr Val Trp Lys Leu
 225 230 235 240
 Gln Pro Thr Ala Gly Leu Gln Asp Leu His Ile His Ser Arg Gln Glu
 245 250 255
 Glu Glu Gln Ser Glu Ile Met Glu Tyr Ser Val Leu Leu Pro Arg Thr
 260 265 270
 Leu Phe Gln Arg Thr Lys Gly Arg Ser Gly Glu Ala Glu Lys Arg Leu
 275 280 285
 Leu Leu Val Asp Phe Ser Ser Gln Ala Leu Phe Gln Asp Lys Asn Ser
 290 295 300
 Ser Gln Val Leu Gly Glu Lys Val Leu Gly Ile Val Val Gln Asn Thr
 305 310 315 320
 Lys Val Ala Asn Leu Thr Glu Pro Val Val Leu Thr Phe Gln His Gln
 325 330 335
 Leu Gln Pro Lys Asn Val Thr Leu Gln Cys Val Phe Trp Val Glu Asp
 340 345 350
 Pro Thr Leu Ser Ser Pro Gly His Trp Ser Ser Ala Gly Cys Glu Thr
 355 360 365
 Val Arg Arg Glu Thr Gln Thr Ser Cys Phe Cys Asn His Leu Thr Tyr
 370 375 380
 Phe Ala Val Leu Met Val Ser Ser Val Glu Val Asp Ala Val His Lys
 385 390 395 400

His Tyr Leu Ser Leu Leu Ser Tyr Val Gly Cys Val Val Ser Ala Leu
 405 410 415
 Ala Cys Leu Val Thr Ile Ala Ala Tyr Leu Cys Ser Arg Val Pro Leu
 420 425 430
 Pro Cys Arg Arg Lys Pro Arg Asp Tyr Thr Ile Lys Val His Met Asn
 435 440 445
 Leu Leu Leu Ala Val Phe Leu Leu Asp Thr Ser Phe Leu Leu Ser Glu
 450 455 460
 Pro Val Ala Leu Thr Gly Ser Glu Ala Gly Cys Arg Ala Ser Ala Ile
 465 470 475 480
 Phe Leu His Phe Ser Leu Leu Thr Cys Leu Ser Trp Met Gly Leu Glu
 485 490 495
 Gly Tyr Asn Leu Tyr Arg Leu Val Val Glu Val Phe Gly Thr Tyr Val
 500 505 510
 Pro Gly Tyr Leu Leu Lys Leu Ser Ala Met Gly Trp Gly Phe Pro Ile
 515 520 525
 Phe Leu Val Thr Leu Val Ala Leu Val Asp Val Asp Asn Tyr Gly Pro
 530 535 540
 Ile Ile Leu Ala Val His Arg Thr Pro Glu Gly Val Ile Tyr Pro Ser
 545 550 555 560
 Met Cys Trp Ile Arg Asp Ser Leu Val Ser Tyr Ile Thr Asn Leu Gly
 565 570 575
 Leu Phe Ser Leu Val Phe Leu Phe Asn Met Ala Met Leu Ala Thr Met
 580 585 590
 Val Val Gln Ile Leu Arg Leu Arg Pro His Thr Gln Lys Trp Ser His
 595 600 605
 Val Leu Thr Leu Leu Gly Leu Ser Leu Val Leu Gly Leu Pro Trp Ala
 610 615 620
 Leu Ile Phe Phe Ser Phe Ala Ser Gly Thr Phe Gln Leu Val Val Leu
 625 630 635 640
 Tyr Leu Phe Ser Ile Ile Thr Ser Phe Gln Gly Phe Leu Ile Phe Ile
 645 650 655
 Trp Tyr Trp Ser Met Arg Leu⁹ Gln Ala Arg Gly Gly Pro Ser Pro Leu
 660 665 670
 Lys Ser Asn Ser Asp Ser Ala Arg Leu Pro Ile Ser Ser Gly Ser Thr
 675 680 685
 Ser Ser Ser Arg Ile *
 690 693

<210> 1032

<211> 308

<212> PRT

<213> Homo sapiens

<400> 1032

Phe Gly Pro Arg Gly Gln Glu Phe Gly Thr Arg Ser Arg Gly Gln Leu
 1 5 10 15
 Asp Ala Gly Gln Ser Ser Glu Gln His Gly Gly Asn Arg Gln Pro Glu
 20 25 30
 Gln Ser Arg Ser Arg Ser Ser Ser Ser Ser Pro Arg Arg Ser
 35 40 45
 Arg Ser Ala Ala Glu Pro Ala Met Ala Leu Ser Met Pro Leu Asn Gly
 50 55 60
 Leu Lys Glu Glu Asp Lys Glu Pro Leu Ile Glu Leu Phe Val Lys Ala
 65 70 75 80
 Gly Ser Asp Gly Glu Ser Ile Gly Asn Cys Pro Phe Ser Gln Arg Leu
 85 90 95
 Phe Met Ile Leu Trp Leu Lys Gly Val Val Phe Ser Val Thr Thr Val
 100 105 110
 Asp Leu Lys Arg Lys Pro Ala Asp Leu Gln Asn Leu Ala Pro Gly Thr
 115 120 125

His Pro Pro Phe Ile Thr Phe Asn Ser Glu Val Lys Thr Asp Val Asn
 130 135 140
 Lys Ile Glu Glu Phe Leu Glu Glu Val Leu Cys Pro Pro Lys Tyr Leu
 145 150 155 160
 Lys Leu Ser Pro Lys His Pro Glu Ser Asn Thr Ala Gly Met Asp Ile
 165 170 175
 Phe Ala Lys Phe Ser Ala Tyr Ile Lys Asn Ser Arg Pro Glu Ala Asn
 180 185 190
 Glu Ala Leu Glu Arg Gly Leu Leu Lys Thr Leu Gln Lys Leu Asp Glu
 195 200 205
 Tyr Leu Asn Ser Pro Leu Pro Asp Glu Ile Asp Glu Asn Ser Met Glu
 210 215 220
 Asp Ile Lys Phe Ser Thr Arg Lys Phe Leu Asp Gly Asn Glu Met Thr
 225 230 235 240
 Leu Ala Asp Cys Asn Leu Leu Pro Lys Leu His Ile Val Lys Val Val
 245 250 255
 Ala Lys Lys Tyr Arg Asn Phe Asp Ile Pro Lys Glu Met Thr Gly Ile
 260 265 270
 Trp Arg Tyr Leu Thr Asn Ala Tyr Ser Arg Asp Glu Phe Thr Asn Thr
 275 280 285
 Cys Pro Ser Asp Lys Glu Val Glu Ile Ala Tyr Ser Asp Val Ala Lys
 290 295 300
 Arg Leu Thr Lys
 305 308

<210> 1033
 <211> 133
 <212> PRT
 <213> Homo sapiens

<400> 1033
 Met Gln Val Ile His Gly Pro His Val Glu Lys Leu Gln Ser Pro Leu
 1 5 10 15
 Gly Pro His Arg Pro Ser Pro Arg Cys Pro Leu Ser Val Val Thr Gly
 20 25 30
 Pro Asp Leu Gln Glu Cys Thr Phe His Ser Thr Arg Lys Pro Tyr Asp
 35 40 45
 Ile Leu Arg Leu Pro Arg Pro Ala Ala Cys Met Gly Pro Leu Pro Ser
 50 55 60
 Ser Thr Pro Thr Leu Arg Met Val Pro Cys Ser Ala Leu Val Leu Cys
 65 70 75 80
 Trp Pro Leu Pro Ala Thr Pro Thr Leu Arg His Pro Gly Val Val Gly
 85 90 95
 Pro Asn Trp Leu Ala Pro Pro Ser Ala Ala Leu Cys Arg Pro Asp Ala
 100 105 110
 Ala Val Trp Pro Asp Leu Pro Ser Asn Ile Leu Leu Val Thr Pro
 115 120 125
 Pro Pro Ala Lys *
 130 132

<210> 1034
 <211> 542
 <212> PRT
 <213> Homo sapiens

<400> 1034
 Met Arg Leu Lys Met Thr Thr Arg Asn Phe Pro Glu Arg Glu Val Pro
 1 5 10 15

Cys Asp Val Glu Val Glu Arg Phe Thr Arg Glu Val Pro Cys Leu Ser
 20 25 30
 Ser Leu Gly Asp Gly Trp Asp Cys Glu Asn Gln Glu Gly His Leu Arg
 35 40 45
 Gln Ser Ala Leu Thr Leu Glu Lys Pro Gly Thr Gln Glu Ala Ile Cys
 50 55 60
 Glu Tyr Pro Gly Phe Gly Glu His Leu Ile Ala Ser Ser Asp Leu Pro
 65 70 75 80
 Pro Ser Gln Arg Val Leu Ala Thr Asn Gly Phe His Ala Pro Asp Ser
 85 90 95
 Asn Val Ser Gly Leu Asp Cys Asp Pro Ala Leu Pro Ser Tyr Pro Lys
 100 105 110
 Ser Tyr Ala Asp Lys Arg Thr Gly Asp Ser Asp Ala Cys Gly Lys Gly
 115 120 125
 Phe Asn His Ser Met Glu Val Ile His Gly Arg Asn Pro Val Arg Glu
 130 135 140
 Lys Pro Tyr Lys Tyr Pro Glu Ser Val Lys Ser Phe Asn His Phe Thr
 145 150 155 160
 Ser Leu Gly His Gln Lys Ile Met Lys Arg Gly Lys Lys Ser Tyr Glu
 165 170 175
 Gly Lys Asn Phe Glu Asn Ile Phe Thr Leu Ser Ser Ser Leu Asn Glu
 180 185 190
 Asn Gln Arg Asn Leu Pro Gly Glu Lys Gln Tyr Arg Cys Thr Glu Cys
 195 200 205
 Gly Lys Cys Phe Lys Arg Asn Ser Ser Leu Val Leu His His Arg Thr
 210 215 220
 His Thr Gly Glu Lys Pro Tyr Thr Cys Asn Glu Cys Gly Lys Ser Phe
 225 230 235 240
 Ser Lys Asn Tyr Asn Leu Ile Val His Gln Arg Ile His Thr Gly Glu
 245 250 255
 Lys Pro Tyr Glu Cys Ser Lys Cys Gly Lys Ala Phe Ser Asp Gly Ser
 260 265 270
 Ala Leu Thr Gln His Gln Arg Ile His Thr Gly Glu Lys Pro Tyr Glu
 275 280 285
 Cys Leu Glu Cys Gly Lys Thr Phe Asn Arg Asn Ser Ser Leu Ile Leu
 290 295 300
 His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Arg Cys Asn Glu Cys
 305 310 315 320
 Gly Lys Pro Phe Thr Asp Ile Ser His Leu Thr Val His Leu Arg Ile
 325 330 335
 His Thr Gly Glu Lys Pro Tyr Glu Cys Ser Lys Cys Gly Lys Ala Phe
 340 345 350
 Arg Asp Gly Ser Tyr Leu Thr Gln His Glu Arg Thr His Thr Gly Glu
 355 360 365
 Lys Pro Phe Glu Cys Ala Glu Cys Gly Lys Ser Phe Asn Arg Asn Ser
 370 375 380
 His Leu Ile Val His Gln Lys Ile His Ser Gly Glu Lys Pro Tyr Glu
 385 390 395 400
 Cys Lys Glu Cys Gly Lys Thr Phe Ile Glu Ser Ala Tyr Leu Ile Arg
 405 410 415
 His Gln Arg Ile His Thr Gly Glu Lys Pro Tyr Gly Cys Asn Gln Cys
 420 425 430
 Gln Lys Leu Phe Arg Asn Ile Ala Gly Leu Ile Arg His Gln Arg Thr
 435 440 445
 His Thr Gly Glu Lys Pro Tyr Glu Cys Asn Gln Cys Gly Lys Ala Phe
 450 455 460
 Arg Asp Ser Ser Cys Leu Thr Lys His Gln Arg Ile His Thr Lys Glu
 465 470 475 480
 Thr Pro Tyr Gln Cys Pro Glu Cys Gly Lys Ser Phe Lys Gln Asn Ser
 485 490 495
 His Leu Ala Val His Gln Arg Leu His Ser Arg Glu Gly Pro Ser Arg
 500 505 510
 Cys Pro Gln Cys Gly Lys Met Phe Gln Lys Ser Ser Ser Leu Val Arg
 515 520 525

His Gln Arg Ala His Leu Gly Glu Gln Pro Met Glu Thr *
 530 535 540 541

<210> 1035
 <211> 508
 <212> PRT
 <213> Homo sapiens

<400> 1035
 Leu Pro Asp Arg Asn Ser Arg Val Asp Pro Arg Val Arg Ser Leu Thr
 1 5 10 15
 Glu Leu Leu Ser Phe Phe Gln Pro Thr Ala His Ser Leu Thr Ser Leu
 20 25 30
 Leu Gly Thr Met Thr Thr Cys Ser Arg Gln Phe Thr Ser Ser Ser Ser
 35 40 45
 Met Lys Gly Ser Cys Gly Ile Gly Gly Gly Ile Gly Gly Gly Ser Ser
 50 55 60
 Arg Ile Ser Ser Val Leu Ala Gly Gly Ser Cys Arg Ala Pro Ser Thr
 65 70 75 80
 Tyr Gly Gly Gly Leu Ser Val Ser Ser Arg Phe Ser Ser Gly Gly Ala
 85 90 95
 Cys Gly Leu Gly Gly Gly Tyr Gly Gly Gly Phe Ser Ser Ser Ser Ser
 100 105 110
 Phe Gly Ser Gly Phe Gly Gly Gly Tyr Gly Gly Gly Leu Gly Ala Gly
 115 120 125
 Phe Gly Gly Gly Leu Gly Ala Gly Phe Gly Gly Gly Phe Ala Gly Gly
 130 135 140
 Asp Gly Leu Leu Val Gly Ser Glu Lys Val Thr Met Gln Asn Leu Asn
 145 150 155 160
 Asp Arg Leu Ala Ser Tyr Leu Asp Lys Val Arg Ala Leu Glu Glu Ala
 165 170 175
 Asn Ala Asp Leu Glu Val Lys Ile Arg Asp Trp Tyr Gln Arg Gln Arg
 180 185 190
 Pro Ser Glu Ile Lys Asp Tyr Ser Pro Tyr Phe Lys Thr Ile Glu Asp
 195 200 205
 Leu Arg Asn Lys Ile Ile Ala Ala Thr Ile Glu Asn Ala Gln Pro Ile
 210 215 220
 Leu Gln Ile Asp Asn Ala Arg Leu Ala Ala Asp Asp Phe Arg Thr Lys
 225 230 235 240
 Tyr Glu His Glu Leu Ala Leu Arg Gln Thr Val Glu Ala Asp Val Asn
 245 250 255
 Gly Leu Arg Arg Val Leu Asp Glu Leu Thr Leu Ala Arg Thr Asp Leu
 260 265 270
 Glu Met Gln Ile Glu Gly Leu Lys Glu Glu Leu Ala Tyr Leu Arg Lys
 275 280 285
 Asn His Glu Glu Glu Met Leu Ala Leu Arg Gly Gln Thr Gly Gly Asp
 290 295 300
 Val Asn Val Glu Met Asp Ala Ala Pro Gly Val Asp Leu Ser Arg Ile
 305 310 315 320
 Leu Asn Glu Met Arg Asp Gln Tyr Glu Gln Met Ala Glu Lys Asn Arg
 325 330 335
 Arg Asp Ala Glu Thr Trp Phe Leu Ser Lys Thr Glu Glu Leu Asn Lys
 340 345 350
 Glu Val Ala Ser Asn Ser Glu Leu Val Gln Ser Ser Arg Ser Glu Val
 355 360 365
 Thr Glu Leu Arg Arg Val Leu Gln Gly Leu Glu Ile Glu Leu Gln Ser
 370 375 380
 Gln Leu Ser Met Lys Ala Ser Leu Glu Asn Ser Leu Glu Glu Thr Lys
 385 390 395 400
 Gly Arg Tyr Cys Met Gln Leu Ser Gln Ile Gln Gly Leu Ile Gly Ser
 405 410 415

Val Glu Glu Gln Leu Ala Gln Leu Arg Cys Glu Met Glu Gln Gln Ser
 420 425 430
 Gln Glu Tyr Gln Ile Leu Leu Asp Val Lys Thr Arg Leu Glu Gln Glu
 435 440 445
 Ile Ala Thr Tyr Arg Arg Leu Leu Glu Gly Glu Asp Ala His Leu Ser
 450 455 460
 Ser Gln Gln Ala Ser Gly Gln Ser Tyr Ser Ser Arg Glu Val Phe Thr
 465 470 475 480
 Ser Ser Ser Ser Ser Ser Ser Arg Gln Thr Arg Pro Ile Leu Lys Glu
 485 490 495
 Gln Ser Ser Ser Ser Phe Ser Gln Gly Gln Ser Ser
 500 505 508

<210> 1036
 <211> 251
 <212> PRT
 <213> Homo sapiens

<400> 1036
 Met Ser His Ala Gly Thr Gly Asn Ile Val Val Ile Met Ile Ser Tyr
 1 5 10 15
 Pro Lys Gly Arg Glu Ile Leu Glu Leu Val Gln Lys Gly Ile Pro Val
 20 25 30
 Thr Met Thr Ile Gly Val Gly Thr Arg His Val Gln Glu Phe Ile Ser
 35 40 45
 Gly Gln Ser Val Val Phe Val Ala Ile Ala Phe Ile Thr Met Met Ile
 50 55 60
 Ile Ser Leu Ala Trp Leu Ile Phe Tyr Tyr Ile Gln Arg Phe Leu Tyr
 65 70 75 80
 Thr Gly Ser Gln Ile Gly Ser Gln Ser His Arg Lys Glu Thr Lys Lys
 85 90 95
 Val Ile Gly Gln Leu Leu Leu His Thr Val Lys His Gly Glu Lys Gly
 100 105 110
 Ile Asp Val Asp Ala Glu Asn Cys Ala Val Cys Ile Glu Asn Phe Lys
 115 120 125
 Val Lys Asp Ile Ile Arg Ile Leu Pro Cys Lys His Ile Phe His Arg
 130 135 140
 Ile Cys Ile Asp Pro Trp Leu Leu Asp His Arg Thr Cys Pro Met Cys
 145 150 155 160
 Lys Leu Asp Val Ile Lys Ala Leu Gly Tyr Trp Gly Glu Pro Gly Asp
 165 170 175
 Val Gln Glu Met Pro Ala Pro Glu Ser Pro Pro Gly Arg Asp Pro Ala
 180 185 190
 Ala Asn Leu Ser Leu Ala Leu Pro Asp Asp Asp Gly Ser Asp Glu Ser
 195 200 205
 Ser Pro Pro Ser Ala Ser Pro Ala Glu Ser Glu Pro Gln Cys Asp Pro
 210 215 220
 Ser Phe Lys Gly Asp Ala Gly Glu Asn Thr Ala Leu Leu Glu Ala Gly
 225 230 235 240
 Arg Ser Asp Ser Arg His Gly Gly Pro Ile Ser
 245 250 251

<210> 1037
 <211> 789
 <212> PRT
 <213> Homo sapiens

<400> 1037

Met	Thr	Ile	His	Gln	Phe	Leu	Leu	Leu	Phe	Leu	Phe	Trp	Val	Cys	Leu
1				5					10					15	
Pro	His	Phe	Cys	Ser	Pro	Glu	Ile	Met	Phe	Arg	Arg	Thr	Pro	Val	Pro
			20					25					30		
Gln	Gln	Arg	Ile	Leu	Ser	Ser	Arg	Val	Pro	Arg	Ser	Asp	Gly	Lys	Ile
		35					40					45			
Leu	His	Arg	Gln	Lys	Arg	Gly	Trp	Met	Trp	Asn	Gln	Phe	Phe	Leu	Leu
	50					55				60					
Glu	Glu	Tyr	Thr	Gly	Ser	Asp	Tyr	Gln	Tyr	Val	Gly	Lys	Leu	His	Ser
65					70					75				80	
Asp	Gln	Asp	Lys	Gly	Asp	Gly	Ser	Leu	Lys	Tyr	Ile	Leu	Ser	Gly	Asp
			85						90					95	
Gly	Ala	Gly	Thr	Leu	Phe	Ile	Ile	Asp	Glu	Lys	Thr	Gly	Asp	Ile	His
			100					105					110		
Ala	Thr	Arg	Arg	Ile	Asp	Arg	Glu	Lys	Ala	Phe	Tyr	Thr	Leu	Arg	
	115						120					125			
Ala	Gln	Ala	Ile	Asn	Arg	Arg	Thr	Leu	Arg	Pro	Val	Glu	Pro	Glu	Ser
130							135				140				
Glu	Phe	Val	Ile	Lys	Ile	His	Asp	Ile	Asn	Asp	Asn	Glu	Pro	Thr	Phe
145				150						155				160	
Pro	Glu	Glu	Ile	Tyr	Thr	Ala	Ser	Val	Pro	Glu	Met	Ser	Val	Val	Gly
			165						170					175	
Thr	Ser	Val	Val	Gln	Val	Thr	Ala	Thr	Asp	Ala	Asp	Asp	Pro	Ser	Tyr
			180					185					190		
Gly	Asn	Ser	Ala	Arg	Val	Ile	Tyr	Ser	Ile	Leu	Gln	Gly	Gln	Pro	Tyr
	195						200					205			
Phe	Ser	Val	Glu	Pro	Glu	Thr	Gly	Ile	Ile	Arg	Thr	Ala	Leu	Pro	Asn
210						215					220				
Met	Asn	Arg	Glu	Asn	Arg	Glu	Gln	Tyr	Gln	Val	Val	Ile	Gln	Ala	Lys
225					230					235					240
Asp	Met	Gly	Gly	Gln	Met	Gly	Gly	Leu	Ser	Gly	Thr	Thr	Thr	Val	Asn
			245						250					255	
Ile	Thr	Leu	Thr	Asp	Val	Asn	Asp	Asn	Pro	Pro	Arg	Phe	Pro	Gln	Asn
			260					265					270		
Thr	Ile	His	Leu	Arg	Val	Leu	Glu	Ser	Ser	Pro	Val	Gly	Thr	Ala	Ile
	275						280					285			
Gly	Ser	Val	Lys	Ala	Thr	Asp	Ala	Asp	Thr	Gly	Lys	Asn	Ala	Glu	Val
	290					295					300				
Glu	Tyr	Arg	Ile	Ile	Asp	Gly	Asp	Gly	Thr	Asp	Met	Phe	Asp	Ile	Val
305					310					315				320	
Thr	Glu	Lys	Asp	Thr	Gln	Glu	Gly	Ile	Ile	Thr	Val	Lys	Lys	Pro	Leu
			325						330					335	
Asp	Tyr	Glu	Ser	Arg	Arg	Leu	Tyr	Thr	Leu	Lys	Val	Glu	Ala	Glu	Asn
			340					345					350		
Thr	His	Val	Asp	Pro	Arg	Phe	Tyr	Tyr	Leu	Gly	Pro	Phe	Lys	Asp	Thr
	355						360					365			
Thr	Ile	Val	Lys	Ile	Ser	Ile	Glu	Asp	Val	Asp	Glu	Pro	Pro	Val	Phe
	370					375					380				
Ser	Arg	Ser	Ser	Tyr	Leu	Phe	Glu	Val	His	Glu	Asp	Ile	Glu	Val	Gly
385					390					395				400	
Thr	Ile	Ile	Gly	Thr	Val	Met	Ala	Arg	Asp	Pro	Asp	Ser	Ile	Ser	Ser
			405						410					415	
Pro	Ile	Arg	Phe	Ser	Leu	Asp	Arg	His	Thr	Asp	Leu	Asp	Arg	Ile	Phe
			420					425					430		
Asn	Ile	His	Ser	Gly	Asn	Gly	Ser	Leu	Tyr	Thr	Ser	Lys	Pro	Leu	Asp
	435						440					445			
Arg	Glu	Leu	Ser	Gln	Trp	His	Asn	Leu	Thr	Val	Ile	Ala	Ala	Glu	Ile
	450					455					460				
Asn	Asn	Pro	Lys	Glu	Thr	Thr	Arg	Val	Ala	Val	Phe	Val	Arg	Ile	Leu
465					470					475				480	
Asp	Val	Asn	Asp	Asn	Ala	Pro	Gln	Phe	Ala	Val	Phe	Tyr	Asp	Thr	Phe
			485						490					495	
Val	Cys	Glu	Asn	Ala	Arg	Pro	Gly	Gln	Leu	Ile	Gln	Thr	Ile	Ser	Ala
			500					505					510		

Val Asp Lys Asp Asp Pro Leu Gly Gly Gln Lys Phe Phe Phe Ser Leu
 515 520 525
 Ala Ala Val Asn Pro Asn Phe Thr Val Gln Asp Asn Glu Asp Asn Thr
 530 535 540
 Ala Arg Ile Leu Thr Arg Lys Asn Gly Phe Asn Arg His Glu Ile Ser
 545 550 555 560
 Thr Tyr Leu Leu Pro Val Val Ile Ser Asp Asn Asp Tyr Pro Ile Gln
 565 570 575
 Ser Ser Thr Gly Thr Leu Thr Ile Arg Val Cys Ala Cys Asp Ser Gln
 580 585 590
 Gly Asn Met Gln Ser Cys Ser Ala Glu Ala Leu Leu Leu Pro Ala Gly
 595 600 605
 Leu Ser Thr Gly Ala Leu Ile Ala Ile Leu Leu Cys Ile Ile Ile Leu
 610 615 620
 Leu Val Ile Val Val Leu Phe Ala Ala Leu Lys Arg Gln Arg Lys Lys
 625 630 635 640
 Glu Pro Leu Ile Leu Ser Lys Glu Asp Ile Arg Asp Asn Ile Val Ser
 645 650 655
 Tyr Asn Asp Glu Gly Gly Gly Glu Glu Asp Thr Gln Ala Phe Asp Ile
 660 665 670
 Gly Thr Leu Arg Asn Pro Ala Ala Ile Glu Glu Lys Lys Leu Arg Arg
 675 680 685
 Asp Ile Ile Pro Glu Thr Leu Phe Ile Pro Arg Arg Thr Pro Thr Ala
 690 695 700
 Pro Asp Asn Thr Asp Val Arg Asp Phe Ile Asn Glu Arg Leu Lys Glu
 705 710 715 720
 His Asp Leu Asp Pro Thr Ala Pro Pro Tyr Asp Ser Leu Ala Thr Tyr
 725 730 735
 Ala Tyr Glu Gly Asn Asp Ser Ile Ala Glu Ser Leu Ser Ser Leu Glu
 740 745 750
 Ser Gly Thr Thr Glu Gly Asp Gln Asn Tyr Asp Tyr Leu Arg Glu Trp
 755 760 765
 Gly Pro Arg Phe Asn Lys Leu Ala Glu Met Tyr Gly Gly Gly Glu Ser
 770 775 780
 Asp Lys Asp Ser *
 785 788

<210> 1038
 <211> 172
 <212> PRT
 <213> Homo sapiens

<400> 1038
 Met Ser Leu Cys Glu Trp Thr Leu Pro Leu Pro Thr Arg Val Ser Leu
 1 5 10 15
 Ser Ser His Pro Ser His Gln Ser His Ser His Leu Leu Val Trp Leu
 20 25 30
 Phe Gly Glu Cys Arg Pro Gly Gln Gly His Arg Leu Gly His Glu Ser
 35 40 45
 Ser Ala Tyr Cys Pro Gly Gln Met Gln Ile Pro Cys His Gly Ile Pro
 50 55 60
 Gln Lys Val Leu Phe Phe Arg Trp Gly Lys Ser Val Gly Ile Met Leu
 65 70 75 80
 Thr Glu Leu Glu Lys Ala Leu Asn Ser Ile Ile Asp Val Tyr His Lys
 85 90 95
 Tyr Ser Leu Ile Lys Gly Asn Phe His Ala Val Tyr Arg Asp Asp Leu
 100 105 110
 Lys Lys Leu Leu Glu Thr Glu Cys Pro Gln Tyr Ile Arg Lys Lys Gly
 115 120 125
 Ala Asp Val Trp Phe Lys Glu Leu Asp Ile Asn Thr Asp Gly Ala Val
 130 135 140

Asn Phe Gln Glu Phe Leu Ile Leu Val Ile Lys Met Gly Val Ala Ala
 145 150 155 160
 His Lys Lys Ser His Glu Glu Ser His Lys Glu *
 165 170 171

<210> 1039

<211> 418

<212> PRT

<213> Homo sapiens

<400> 1039

Met Tyr Glu Gly Ile Arg Cys Leu Leu Lys Ala Leu Leu Gly Phe Val
 1 5 10 15
 Ser Leu Ala Ile Gly Thr Leu Tyr Cys Pro Arg Gln Tyr Arg Pro Phe
 20 25 30
 Pro Gly Ser Leu Gly Ile Glu Ala Ile Asn Val Pro Glu Pro Ile Pro
 35 40 45
 Asp Ser Tyr Tyr Arg Asp Met Ala Thr Trp Pro Thr His Ala Pro Ser
 50 55 60
 Val Glu Glu Gly Gly Gln Gly Arg Phe Gly Asn Gln Ala Asp His Phe
 65 70 75 80
 Leu Gly Ser Leu Ala Phe Ala Lys Leu Leu Asn Arg Thr Leu Ala Val
 85 90 95
 Pro Pro Trp Ile Glu Tyr Gln His His Lys Pro Pro Phe Thr Asn Leu
 100 105 110
 His Val Ser Tyr Gln Lys Tyr Phe Lys Leu Glu Pro Leu Gln Ala Tyr
 115 120 125
 His Arg Val Ile Ser Leu Glu Asp Phe Met Glu Lys Leu Ala Pro Thr
 130 135 140
 His Trp Pro Pro Glu Lys Arg Val Ala Tyr Cys Phe Glu Val Ala Ala
 145 150 155 160
 Gln Arg Ser Pro Asp Lys Lys Thr Cys Pro Met Lys Glu Gly Asn Pro
 165 170 175
 Phe Gly Pro Phe Trp Asp Gln Phe His Val Ser Phe Asn Lys Ser Glu
 180 185 190
 Leu Phe Thr Gly Ile Ser Phe Ser Ala Ser Tyr Arg Glu Gln Trp Ser
 195 200 205
 Gln Arg Phe Ser Pro Lys Glu His Pro Val Leu Ala Leu Pro Gly Ala
 210 215 220
 Pro Ala Gln Phe Pro Val Leu Glu Glu His Arg Pro Leu Gln Lys Tyr
 225 230 235 240
 Met Val Trp Ser Asp Glu Met Val Lys Thr Gly Glu Ala Gln Ile His
 245 250 255
 Ala His Leu Val Arg Pro Tyr Val Gly Ile His Leu Arg Ile Gly Ser
 260 265 270
 Asp Trp Lys Asn Ala Cys Ala Met Leu Lys Asp Gly Thr Ala Gly Ser
 275 280 285
 His Phe Met Ala Ser Pro Gln Cys Val Gly Tyr Ser Arg Ser Thr Ala
 290 295 300
 Ala Pro Leu Thr Met Thr Met Cys Leu Pro Asp Leu Lys Glu Ile Gln
 305 310 315 320
 Arg Ala Val Lys Leu Trp Val Arg Ser Leu Asp Ala Gln Ser Val Tyr
 325 330 335
 Val Ala Thr Asp Ser Glu Ser Tyr Val Pro Glu Leu Gln Gln Leu Phe
 340 345 350
 Lys Gly Lys Val Lys Val Val Ser Leu Lys Pro Glu Val Ala Gln Val
 355 360 365
 Asp Leu Tyr Ile Leu Gly Gln Ala Asp His Phe Ile Gly Asn Cys Val
 370 375 380
 Ser Ser Phe Thr Ala Phe Val Lys Arg Glu Arg Asp Leu Gln Gly Arg
 385 390 395 400

Pro Ser Ser Phe Phe Gly Met Asp Arg Pro Pro Lys Leu Arg Asp Glu
 405 410 415
 Phe *
 417

<210> 1040
 <211> 228
 <212> PRT
 <213> Homo sapiens

<400> 1040
 Met Ala Gly Glu Ser Phe Met Ala Thr Ala Pro Phe Val Gln Ile Gly
 1 5 10 15
 Arg Phe Phe Leu Ser Ser Gly Leu Ile Asp Lys Val Asp Asn Phe Lys
 20 25 30
 Ser Leu Ser Leu Ser Lys Leu Glu Asp Pro His Val Asp Ile Ile Arg
 35 40 45
 Arg Gly Asp Phe Phe Tyr His Ser Glu Asn Pro Lys Tyr Pro Glu Val
 50 55 60
 Gly Asp Leu Arg Val Ser Phe Ser Tyr Ala Gly Leu Ser Gly Asp Asp
 65 70 75 80
 Pro Asp Leu Gly Pro Ala His Val Val Thr Val Ile Ala Arg Gln Arg
 85 90 95
 Gly Asp Gln Leu Val Pro Phe Ser Thr Lys Ser Gly Asp Thr Leu Leu
 100 105 110
 Leu Leu His His Gly Asp Phe Ser Ala Glu Glu Val Phe His Arg Glu
 115 120 125
 Leu Arg Ser Asn Ser Met Lys Thr Trp Gly Leu Arg Ala Ala Gly Trp
 130 135 140
 Met Ala Met Phe Met Gly Leu Asn Leu Met Thr Arg Ile Leu Tyr Thr
 145 150 155 160
 Leu Val Asp Trp Phe Pro Val Phe Arg Asp Leu Val Asn Ile Gly Leu
 165 170 175
 Lys Ala Phe Ala Phe Cys Val Ala Thr Ser Leu Thr Leu Leu Thr Val
 180 185 190
 Ala Ala Gly Trp Leu Phe Tyr Arg Pro Leu Trp Ala Leu Leu Ile Ala
 195 200 205
 Gly Leu Ala Leu Val Pro Ile Leu Val Ala Arg Thr Arg Val Pro Ala
 210 215 220
 Lys Lys Leu Glu
 225 228

<210> 1041
 <211> 183
 <212> PRT
 <213> Homo sapiens

<400> 1041
 Met Thr Ala Gln Gly Gly Leu Val Ala Asn Arg Gly Arg Arg Phe Lys
 1 5 10 15
 Trp Ala Ile Glu Leu Ser Gly Pro Gly Gly Gly Ser Arg Gly Arg Ser
 20 25 30
 Asp Arg Gly Ser Gly Gln Gly Asp Ser Leu Tyr Pro Val Gly Tyr Leu
 35 40 45
 Asp Lys Gln Val Pro Asp Thr Ser Val Gln Glu Thr Asp Arg Ile Leu
 50 55 60
 Val Glu Lys Arg Cys Trp Asp Ile Ala Leu Gly Pro Leu Lys Gln Ile
 65 70 75 80

Pro Met Asn Leu Phe Ile Met Tyr Met Ala Gly Asn Thr Ile Ser Ile
 85 90 95
 Phe Pro Thr Met Met Val Cys Met Met Ala Trp Arg Pro Ile Gln Ala
 100 105 110
 Leu Met Ala Ile Ser Ala Thr Phe Lys Met Leu Glu Ser Ser Ser Gln
 115 120 125
 Lys Phe Leu Gln Gly Leu Val Tyr Leu Ile Gly Asn Leu Met Gly Leu
 130 135 140
 Ala Leu Ala Val Tyr Lys Cys Gln Ser Met Gly Leu Leu Pro Thr His
 145 150 155 160
 Ala Ser Asp Trp Leu Ala Phe Ile Glu Pro Pro Glu Arg Met Glu Phe
 165 170 175
 Ser Gly Gly Gly Leu Leu Leu
 180 183

<210> 1042
 <211> 309
 <212> PRT
 <213> Homo sapiens

<400> 1042
 Met Ala Ser Ser Asn Thr Val Leu Met Arg Leu Val Ala Ser Ala Tyr
 1 5 10 15
 Ser Ile Ala Gln Lys Ala Gly Met Ile Val Arg Arg Val Ile Ala Glu
 20 25 30
 Gly Asp Leu Gly Ile Val Glu Lys Thr Cys Ala Thr Asp Leu Gln Thr
 35 40 45
 Lys Ala Asp Arg Leu Ala Gln Met Ser Ile Cys Ser Ser Leu Ala Arg
 50 55 60
 Lys Phe Pro Lys Leu Thr Ile Ile Gly Glu Glu Asp Leu Pro Ser Glu
 65 70 75 80
 Glu Val Asp Gln Glu Leu Ile Glu Asp Ser Gln Trp Glu Glu Ile Leu
 85 90 95
 Lys Gln Pro Cys Pro Ser Gln Tyr Ser Ala Ile Lys Glu Glu Asp Leu
 100 105 110
 Val Val Trp Val Asp Pro Leu Asp Gly Thr Lys Glu Tyr Thr Glu Gly
 115 120 125
 Leu Leu Asp Asn Val Thr Val Leu Ile Gly Ile Ala Tyr Glu Gly Lys
 130 135 140
 Ala Ile Ala Gly Val Ile Asn Gln Pro Tyr Tyr Asn Tyr Glu Ala Gly
 145 150 155 160
 Pro Asp Ala Val Leu Gly Arg Thr Ile Trp Gly Val Leu Gly Leu Gly
 165 170 175
 Ala Phe Gly Phe Gln Leu Lys Glu Val Pro Ala Gly Lys His Ile Ile
 180 185 190
 Thr Thr Thr Arg Ser His Ser Asn Lys Leu Val Thr Asp Cys Val Ala
 195 200 205
 Ala Met Asn Pro Asp Ala Val Leu Arg Val Gly Gly Ala Gly Asn Lys
 210 215 220
 Ile Ile Gln Leu Ile Glu Gly Lys Ala Ser Ala Tyr Val Phe Ala Ser
 225 230 235 240
 Pro Gly Cys Lys Lys Trp Asp Thr Cys Ala Pro Glu Val Ile Leu His
 245 250 255
 Ala Val Gly Gly Lys Leu Thr Asp Ile His Gly Asn Val Leu Gln Tyr
 260 265 270
 His Lys Asp Val Lys His Met Asn Ser Ala Gly Val Leu Ala Thr Leu
 275 280 285
 Arg Asn Tyr Asp Tyr Tyr Ala Ser Arg Val Pro Glu Ser Ile Lys Asn
 290 295 300
 Ala Leu Val Pro *
 305 308

<210> 1043
 <211> 382
 <212> PRT
 <213> Homo sapiens

<400> 1043
 Met Arg Ser His Thr Ile Thr Met Thr Thr Thr Ser Val Ser Ser Trp
 1 5 10 15
 Pro Tyr Ser Ser His Arg Met Arg Phe Ile Thr Asn His Ser Asp Gln
 20 25 30
 Pro Pro Gln Asn Phe Ser Ala Thr Pro Asn Val Thr Thr Cys Pro Met
 35 40 45
 Asp Glu Lys Leu Leu Ser Thr Val Leu Thr Thr Ser Tyr Ser Val Ile
 50 55 60
 Phe Ile Val Gly Leu Val Gly Asn Ile Ile Ala Leu Tyr Val Phe Leu
 65 70 75 80
 Gly Ile His Arg Lys Arg Asn Ser Ile Gln Ile Tyr Leu Leu Asn Val
 85 90 95
 Ala Ile Ala Asp Leu Leu Leu Ile Phe Cys Leu Pro Phe Arg Ile Met
 100 105 110
 Tyr His Ile Asn Gln Asn Lys Trp Thr Leu Gly Val Ile Leu Cys Lys
 115 120 125
 Val Val Gly Thr Leu Phe Tyr Met Asn Met Tyr Ile Ser Ile Ile Leu
 130 135 140
 Leu Gly Phe Ile Ser Leu Asp Arg Tyr Ile Lys Ile Asn Arg Ser Ile
 145 150 155 160
 Gln Gln Arg Lys Ala Ile Thr Thr Lys Gln Ser Ile Tyr Val Cys Cys
 165 170 175
 Ile Val Trp Met Leu Ala Leu Gly Gly Phe Leu Thr Met Ile Ile Leu
 180 185 190
 Thr Leu Lys Lys Gly Gly His Asn Ser Thr Met Cys Phe His Tyr Arg
 195 200 205
 Asp Lys His Asn Ala Lys Gly Glu Ala Ile Phe Asn Phe Ile Leu Val
 210 215 220
 Val Met Phe Trp Leu Ile Phe Leu Leu Ile Ile Leu Ser Tyr Ile Lys
 225 230 235 240
 Ile Gly Lys Asn Leu Arg Ile Ser Lys Arg Arg Ser Lys Phe Pro
 245 250 255
 Asn Ser Gly Lys Tyr Ala Thr Thr Ala Arg Asn Ser Phe Ile Val Leu
 260 265 270
 Ile Ile Phe Thr Ile Cys Phe Val Pro Tyr His Ala Phe Arg Phe Ile
 275 280 285
 Tyr Ile Ser Ser Gln Leu Asn Val Ser Ser Cys Tyr Trp Lys Glu Ile
 290 295 300
 Val His Lys Thr Asn Glu Ile Met Leu Val Leu Ser Ser Phe Asn Ser
 305 310 315 320
 Cys Leu Asp Pro Val Met Tyr Phe Leu Met Ser Ser Asn Ile Arg Lys
 325 330 335
 Ile Met Cys Gln Leu Leu Phe Arg Arg Phe Gln Gly Glu Pro Ser Arg
 340 345 350
 Ser Glu Ser Thr Ser Glu Phe Lys Pro Gly Tyr Ser Leu His Asp Thr
 355 360 365
 Ser Val Ala Val Lys Ile Gln Ser Ser Ser Lys Ser Thr *
 370 375 380 381

<210> 1044
 <211> 353
 <212> PRT

<213> Homo sapiens

<400> 1044

```

Met Arg Ser Leu Gly Ala Leu Leu Leu Leu Leu Ser Ala Cys Leu Ala
 1          5          10          15
Val Ser Ala Gly Pro Val Pro Thr Pro Asp Asn Ile Gln Val Gln
      20          25          30
Glu Asn Phe Asn Ile Ser Arg Ile Tyr Gly Lys Trp Tyr Asn Leu Ala
      35          40          45
Ile Gly Ser Thr Cys Pro Trp Leu Lys Lys Ile Met Asp Arg Met Thr
      50          55          60
Val Ser Thr Leu Val Leu Gly Glu Gly Ala Thr Glu Ala Glu Ile Ser
      65          70          75          80
Met Thr Ser Thr Arg Trp Arg Lys Gly Val Cys Glu Glu Thr Ser Gly
      85          90          95
Ala Tyr Glu Lys Thr Asp Thr Asp Gly Lys Phe Leu Tyr His Lys Ser
      100          105          110
Lys Trp Asn Ile Thr Met Glu Ser Tyr Val Val His Thr Asn Tyr Asp
      115          120          125
Glu Tyr Ala Ile Phe Leu Thr Lys Lys Phe Ser Arg His His Gly Pro
      130          135          140
Thr Ile Thr Ala Lys Leu Tyr Gly Arg Ala Pro Gln Leu Arg Glu Thr
      145          150          155          160
Leu Leu Gln Asp Phe Arg Val Val Ala Gln Gly Val Gly Ile Pro Glu
      165          170          175
Asp Ser Ile Phe Thr Met Ala Asp Arg Gly Glu Cys Val Pro Gly Glu
      180          185          190
Gln Glu Pro Glu Pro Ile Leu Ile Pro Arg Val Arg Arg Ala Val Leu
      195          200          205
Pro Gln Glu Glu Glu Gly Ser Gly Gly Gly Gln Leu Val Thr Glu Val
      210          215          220
Thr Lys Lys Glu Asp Ser Cys Gln Leu Gly Tyr Ser Ala Gly Pro Cys
      225          230          235          240
Met Gly Met Thr Ser Arg Tyr Phe Tyr Asn Gly Thr Ser Met Ala Cys
      245          250          255
Glu Thr Phe Gln Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Val
      260          265          270
Thr Glu Lys Glu Cys Leu Gln Thr Cys Arg Thr Val Ala Ala Cys Asn
      275          280          285
Leu Pro Ile Val Arg Gly Pro Cys Arg Ala Phe Ile Gln Leu Trp Ala
      290          295          300
Phe Asp Ala Val Lys Gly Lys Cys Val Leu Phe Pro Tyr Gly Gly Cys
      305          310          315          320
Gln Gly Asn Gly Asn Lys Phe Tyr Ser Glu Lys Glu Cys Arg Glu Tyr
      325          330          335
Cys Gly Val Pro Gly Asp Gly Asp Glu Glu Leu Leu Arg Phe Ser Asn
      340          345          350          352

```

*

<210> 1045

<211> 102

<212> PRT

<213> Homo sapiens

<400> 1045

```

Met Ala Leu Leu Lys Ala Asn Lys Asp Leu Ile Ser Ala Gly Leu Lys
 1          5          10          15
Glu Phe Ser Val Leu Leu Asn Gln Gln Val Phe Asn Asp Pro Leu Val
      20          25          30

```

Ser Glu Glu Asp Met Val Thr Val Val Glu Asp Trp Met Asn Phe Tyr
 35 40 45
 Ile Asn Tyr Tyr Arg Gln Gln Val Thr Gly Glu Pro Gln Glu Arg Asp
 50 55 60
 Lys Ala Leu Gln Glu Leu Arg Gln Glu Leu Asn Thr Leu Ala Asn Pro
 65 70 75 80
 Phe Leu Ala Lys Tyr Arg Asp Phe Leu Lys Ser His Glu Leu Pro Ser
 85 90 95
 His Pro Pro Pro Ser Ser
 100 102

<210> 1046
 <211> 114
 <212> PRT
 <213> Homo sapiens

<400> 1046
 Met Ser Ala Ser Val Val Ser Val Ile Ser Arg Phe Leu Glu Glu Tyr
 1 5 10 15
 Leu Ser Ser Thr Pro Gln Arg Leu Lys Leu Leu Asp Ala Tyr Leu Leu
 20 25 30
 Tyr Ile Leu Leu Thr Gly Ala Leu Gln Phe Gly Tyr Cys Leu Leu Val
 35 40 45
 Gly Thr Phe Pro Phe Asn Ser Phe Leu Ser Gly Phe Ile Ser Cys Val
 50 55 60
 Gly Ser Phe Ile Leu Ala Val Cys Leu Arg Ile Gln Ile Asn Pro Gln
 65 70 75 80
 Asn Lys Ala Asp Phe Gln Gly Ile Ser Pro Glu Arg Ala Phe Ala Asp
 85 90 95
 Phe Leu Phe Ala Ser Thr Ile Leu His Leu Val Val Met Asn Phe Val
 100 105 110
 Gly *
 113

<210> 1047
 <211> 310
 <212> PRT
 <213> Homo sapiens

<400> 1047
 Met Asp Pro Thr Thr Ala Ala Leu Glu Lys Glu His Glu Ala Ile Thr
 1 5 10 15
 Lys Val Lys Tyr Val Asp Lys Ile His Ile Gly Asn Tyr Glu Ile Asp
 20 25 30
 Ala Trp Tyr Phe Ser Pro Phe Pro Glu Asp Tyr Gly Lys Gln Pro Lys
 35 40 45
 Leu Trp Leu Cys Glu Tyr Cys Leu Lys Tyr Met Lys Tyr Glu Lys Ser
 50 55 60
 Tyr Arg Phe His Leu Gly Gln Cys Gln Trp Arg Gln Pro Pro Gly Lys
 65 70 75 80
 Glu Ile Tyr Arg Lys Ser Asn Ile Ser Val Tyr Glu Val Asp Gly Lys
 85 90 95
 Asp His Lys Ile Tyr Cys Gln Asn Leu Cys Leu Leu Ala Lys Leu Phe
 100 105 110
 Leu Asp His Lys Thr Leu Tyr Phe Asp Val Glu Pro Phe Val Phe Tyr
 115 120 125
 Ile Leu Thr Glu Val Asp Arg Gln Gly Ala His Ile Val Gly Tyr Phe
 130 135 140


```

Ser Lys Glu Lys Glu Ser Pro Asp Gly Asn Asn Val Ala Cys Ile Leu
145                      150                      155                      160
Thr Leu Pro Pro Tyr Gln Arg Arg Gly Tyr Gly Lys Phe Leu Ile Ala
                      165                      170                      175
Phe Ser Tyr Glu Leu Ser Lys Leu Glu Ser Thr Val Gly Ser Pro Glu
                      180                      185                      190
Lys Pro Leu Ser Asp Leu Gly Lys Leu Ser Tyr Arg Ser Tyr Trp Ser
                      195                      200                      205
Trp Val Leu Leu Glu Ile Leu Arg Asp Phe Arg Gly Thr Leu Ser Ile
                      210                      215                      220
Lys Asp Leu Ser Gln Met Thr Ser Ile Thr Gln Asn Asp Ile Ile Ser
225                      230                      235                      240
Thr Leu Gln Ser Leu Asn Met Val Lys Tyr Trp Lys Gly Gln His Val
                      245                      250                      255
Ile Cys Val Thr Pro Lys Leu Val Glu Glu His Leu Lys Ser Ala Gln
                      260                      265                      270
Tyr Lys Lys Pro Pro Ile Thr Gly Gly Trp Gly Ala Ala Val Cys Arg
                      275                      280                      285
Gly Arg Trp Gly Ser Val Ser Ile Trp Thr Gly Arg Ser Gln Gly Leu
290                      295                      300
Leu Ile Ala Val Thr *
305                      309

```

```

<210> 1048
<211> 300
<212> PRT
<213> Homo sapiens

```

```

<400> 1048
Met Asp Pro Thr Thr Ala Ala Leu Glu Lys Glu His Glu Ala Ile Thr
1      5      10      15
Lys Val Lys Tyr Val Asp Lys Ile His Ile Gly Asn Tyr Glu Ile Asp
20      25      30
Ala Trp Tyr Phe Ser Pro Phe Pro Glu Asp Tyr Gly Lys Gln Pro Lys
35      40      45
Leu Trp Leu Cys Glu Tyr Cys Leu Lys Tyr Met Lys Tyr Glu Lys Ser
50      55      60
Tyr Arg Phe His Leu Gly Gln Cys Gln Trp Arg Gln Pro Pro Gly Lys
65      70      75      80
Glu Ile Tyr Arg Lys Ser Asn Ile Ser Val Tyr Glu Val Asp Gly Lys
85      90      95
Asp His Lys Ile Tyr Cys Gln Asn Leu Cys Leu Leu Ala Lys Leu Phe
100     105     110
Leu Asp His Lys Thr Leu Tyr Phe Asp Val Glu Pro Phe Val Phe Tyr
115     120     125
Ile Leu Thr Glu Val Asp Arg Gln Gly Ala His Ile Val Gly Tyr Phe
130     135     140
Ser Lys Glu Lys Glu Ser Pro Asp Gly Asn Asn Val Ala Cys Ile Leu
145     150     155     160
Thr Leu Pro Pro Tyr Gln Arg Arg Gly Tyr Gly Lys Phe Leu Ile Ala
165     170     175
Phe Ser Tyr Glu Leu Ser Lys Leu Glu Ser Thr Val Gly Ser Pro Glu
180     185     190
Lys Pro Leu Ser Asp Leu Gly Lys Leu Ser Tyr Arg Ser Tyr Trp Ser
195     200     205
Trp Val Leu Leu Glu Ile Leu Arg Val Ser Gln Met Thr Ser Ile Thr
210     215     220
Gln Asn Asp Ile Ile Ser Thr Leu Gln Ser Leu Asn Met Val Lys Tyr
225     230     235     240
Trp Lys Gly Gln His Val Ile Cys Val Thr Pro Lys Leu Val Glu Glu
245     250     255

```

His Leu Lys Ser Ala Gln Tyr Lys Lys Pro Pro Ile Thr Gly Gly Trp
 260 265 270
 Gly Ala Ala Val Cys Arg Gly Arg Trp Gly Ser Val Ser Ile Trp Thr
 275 280 285
 Gly Arg Ser Gln Gly Leu Leu Ile Ala Val Thr *
 290 295 299

<210> 1049
 <211> 207
 <212> PRT
 <213> Homo sapiens

<400> 1049
 Met Asp Glu Asp Val Leu Thr Thr Leu Lys Ile Leu Ile Ile Gly Glu
 1 5 10 15
 Ser Gly Val Gly Lys Ser Ser Leu Leu Leu Arg Phe Thr Asp Asp Thr
 20 25 30
 Phe Asp Pro Glu Leu Ala Ala Thr Ile Gly Val Asp Phe Lys Val Lys
 35 40 45
 Thr Ile Ser Val Asp Gly Asn Lys Ala Lys Leu Ala Ile Trp Asp Thr
 50 55 60
 Ala Gly Gln Glu Arg Phe Arg Thr Leu Thr Pro Ser Tyr Tyr Arg Gly
 65 70 75 80
 Ala Gln Gly Val Ile Leu Val Tyr Asp Val Thr Arg Arg Asp Thr Phe
 85 90 95
 Val Lys Leu Asp Asn Trp Leu Asn Glu Leu Glu Thr Tyr Cys Thr Arg
 100 105 110
 Asn Asp Ile Val Asn Met Leu Val Gly Asn Lys Ile Asp Lys Glu Asn
 115 120 125
 Arg Glu Val Asp Arg Asn Glu Gly Leu Lys Phe Ala Arg Lys His Ser
 130 135 140
 Met Leu Phe Ile Glu Ala Ser Ala Lys Thr Cys Asp Gly Val Gln Cys
 145 150 155 160
 Ala Phe Glu Glu Leu Val Glu Lys Ile Ile Gln Thr Pro Gly Leu Trp
 165 170 175
 Glu Ser Glu Asn Gln Asn Lys Gly Val Lys Leu Ser His Arg Glu Glu
 180 185 190
 Gly Gln Gly Gly Gly Ala Cys Gly Gly Tyr Cys Ser Val Leu *
 195 200 205 206

<210> 1050
 <211> 67
 <212> PRT
 <213> Homo sapiens

<400> 1050
 Met Val Lys Leu Ser Ile Val Leu Thr Pro Gln Phe Leu Ser His Asp
 1 5 10 15
 Gln Gly Gln Leu Thr Lys Glu Leu Gln His Val Lys Ser Val Thr
 20 25 30
 Cys Pro Cys Glu Tyr Leu Arg Lys Val Ser Glu Cys Arg Gln Met Gly
 35 40 45
 Pro Gly Ala Leu Glu Gln Phe Pro Gly Leu Ser Cys His Thr Ser His
 50 55 60
 Ser Gly *
 65 66

<210> 1051
 <211> 195
 <212> PRT
 <213> Homo sapiens

<400> 1051
 Met Ala Ala Ser Leu Val Gly Lys Lys Ile Val Phe Val Thr Gly Asn
 1 5 10 15
 Ala Lys Lys Leu Glu Glu Val Val Gln Ile Leu Gly Asp Lys Phe Pro
 20 25 30
 Cys Thr Leu Val Ala Gln Lys Ile Asp Leu Pro Glu Tyr Gln Gly Glu
 35 40 45
 Pro Asp Glu Ile Ser Ile Gln Lys Cys Gln Glu Ala Val Arg Gln Val
 50 55 60
 Gln Gly Pro Val Leu Val Glu Asp Thr Cys Leu Cys Phe Asn Ala Leu
 65 70 75 80
 Gly Gly Leu Pro Gly Pro Tyr Ile Lys Trp Phe Leu Glu Lys Leu Lys
 85 90 95
 Pro Glu Gly Leu His Gln Leu Leu Ala Gly Phe Glu Asp Lys Ser Ala
 100 105 110
 Tyr Ala Leu Cys Thr Phe Ala Leu Ser Thr Gly Asp Pro Ser Gln Pro
 115 120 125
 Val Arg Leu Phe Arg Gly Arg Thr Ser Gly Arg Ile Val Ala Pro Arg
 130 135 140
 Gly Cys Gln Asp Phe Gly Trp Asp Pro Cys Phe Gln Pro Asp Gly Tyr
 145 150 155 160
 Glu Gln Thr Tyr Ala Glu Met Pro Lys Ala Glu Lys Asn Ala Val Ser
 165 170 175
 His Arg Phe Arg Ala Leu Leu Glu Leu Gln Glu Tyr Phe Gly Ser Leu
 180 185 190
 Ala Ala *
 194

<210> 1052
 <211> 332
 <212> PRT
 <213> Homo sapiens

<400> 1052
 Met Ile Thr Leu Asn Asn Gln Asp Gln Pro Val Pro Phe Asn Ser Ser
 1 5 10 15
 His Pro Asp Glu Tyr Lys Ile Ala Ala Leu Val Phe Tyr Ser Cys Ile
 20 25 30
 Phe Ile Ile Gly Leu Phe Val Asn Ile Thr Ala Leu Trp Val Phe Ser
 35 40 45
 Cys Thr Thr Lys Lys Arg Thr Thr Val Thr Ile Tyr Met Met Asn Val
 50 55 60
 Ala Leu Val Asp Leu Ile Phe Ile Met Thr Leu Pro Phe Arg Met Phe
 65 70 75 80
 Tyr Tyr Ala Lys Asp Glu Trp Pro Phe Gly Glu Tyr Phe Cys Gln Ile
 85 90 95
 Leu Gly Ala Leu Thr Val Phe Tyr Pro Ser Ile Ala Leu Trp Leu Leu
 100 105 110
 Ala Phe Ile Ser Ala Asp Arg Tyr Met Ala Ile Val Gln Pro Lys Tyr
 115 120 125
 Ala Lys Glu Leu Lys Asn Thr Cys Lys Ala Val Leu Ala Cys Val Gly
 130 135 140
 Val Trp Ile Met Thr Leu Thr Thr Thr Pro Leu Leu Leu Leu Tyr
 145 150 155 160

Lys Asp Pro Asp Lys Asp Ser Thr Pro Ala Thr Cys Leu Lys Ile Ser
 165 170 175
 Asp Ile Ile Tyr Leu Lys Ala Val Asn Val Leu Asn Leu Thr Arg Leu
 180 185 190
 Thr Phe Phe Phe Leu Ile Pro Leu Phe Ile Met Ile Gly Cys Tyr Leu
 195 200 205
 Val Ile Ile His Asn Leu Leu His Gly Arg Thr Ser Lys Leu Lys Pro
 210 215 220
 Lys Val Lys Glu Lys Ser Ile Arg Ile Ile Ile Thr Leu Leu Val Gln
 225 230 235 240
 Val Leu Val Cys Phe Met Pro Phe His Ile Cys Phe Ala Phe Leu Met
 245 250 255
 Leu Gly Thr Gly Glu Asn Ser Tyr Asn Pro Trp Gly Ala Phe Thr Thr
 260 265 270
 Phe Leu Met Asn Leu Ser Thr Cys Leu Asp Val Ile Leu Tyr Tyr Ile
 275 280 285
 Val Ser Lys Gln Phe Gln Ala Arg Val Ile Ser Val Met Leu Tyr Arg
 290 295 300
 Asn Tyr Leu Arg Ser Met Arg Arg Lys Ser Phe Arg Ser Gly Ser Leu
 305 310 315 320
 Arg Ser Leu Ser Asn Ile Asn Ser Glu Met Leu *
 325 330 331

<210> 1053
 <211> 611
 <212> PRT
 <213> Homo sapiens

<400> 1053
 Met Glu Thr Ala Pro Lys Pro Gly Lys Asp Val Pro Pro Lys Lys Asp
 1 5 10 15
 Lys Leu Gln Thr Lys Arg Lys Lys Pro Arg Arg Tyr Trp Glu Glu Glu
 20 25 30
 Thr Val Pro Thr Thr Ala Gly Ala Ser Pro Gly Pro Pro Arg Asn Lys
 35 40 45
 Lys Asn Arg Glu Leu Arg Pro Gln Arg Pro Lys Asn Ala Tyr Ile Leu
 50 55 60
 Lys Lys Ser Arg Ile Ser Lys Lys Pro Gln Val Pro Lys Lys Pro Arg
 65 70 75 80
 Glu Trp Lys Asn Pro Glu Ser Gln Arg Gly Leu Ser Gly Ala Gln Asp
 85 90 95
 Pro Phe Pro Gly Pro Ala Pro Val Pro Val Glu Val Val Gln Lys Phe
 100 105 110
 Cys Arg Ile Asp Lys Ser Arg Lys Leu Pro His Ser Lys Ala Lys Thr
 115 120 125
 Arg Ser Arg Leu Glu Val Ala Glu Ala Glu Glu Glu Thr Ser Ile
 130 135 140
 Lys Ala Ala Arg Ser Glu Leu Leu Leu Ala Glu Glu Pro Gly Phe Leu
 145 150 155 160
 Glu Gly Glu Asp Gly Glu Asp Thr Ala Lys Ile Cys Gln Ala Asp Ile
 165 170 175
 Val Glu Ala Val Asp Ile Ala Ser Ala Ala Lys His Phe Asp Leu Asn
 180 185 190
 Leu Arg Gln Phe Gly Pro Tyr Arg Leu Asn Tyr Ser Arg Thr Gly Arg
 195 200 205
 His Leu Ala Phe Gly Gly Arg Arg Gly His Val Ala Ala Leu Asp Trp
 210 215 220
 Val Thr Lys Lys Leu Met Cys Glu Ile Asn Val Met Glu Ala Val Arg
 225 230 235 240
 Asp Ile Arg Phe Leu His Ser Glu Ala Leu Leu Ala Val Ala Gln Asn
 245 250 255

Arg Trp Leu His Ile Tyr Asp Asn Gln Gly Ile Glu Leu His Cys Ile
 260 265 270
 Arg Arg Cys Asp Arg Val Thr Arg Leu Glu Phe Leu Pro Phe His Phe
 275 280 285
 Leu Leu Ala Thr Ala Ser Glu Thr Gly Phe Leu Thr Tyr Leu Asp Val
 290 295 300
 Ser Val Gly Lys Ile Val Ala Ala Leu Asn Ala Arg Ala Gly Arg Leu
 305 310 315 320
 Asp Val Met Ser Gln Asn Pro Tyr Asn Ala Val Ile His Leu Gly His
 325 330 335
 Ser Asn Gly Thr Val Ser Leu Trp Ser Pro Ala Met Lys Glu Pro Leu
 340 345 350
 Ala Lys Ile Leu Cys His Arg Gly Gly Val Arg Ala Val Ala Val Asp
 355 360 365
 Ser Thr Gly Thr Tyr Met Ala Thr Ser Gly Leu Asp His Gln Leu Lys
 370 375 380
 Ile Phe Asp Leu Arg Gly Thr Tyr Gln Pro Leu Ser Thr Arg Thr Leu
 385 390 395 400
 Pro His Gly Ala Gly His Leu Ala Phe Ser Gln Arg Gly Leu Leu Val
 405 410 415
 Ala Gly Met Gly Asp Val Val Asn Ile Trp Ala Gly Gln Gly Lys Ala
 420 425 430
 Ser Pro Pro Ser Leu Glu Gln Pro Tyr Leu Thr His Arg Leu Ser Gly
 435 440 445
 Pro Val His Gly Leu Gln Phe Cys Pro Phe Glu Asp Val Leu Gly Val
 450 455 460
 Gly His Thr Gly Gly Ile Thr Ser Met Leu Val Pro Gly Ala Gly Glu
 465 470 475 480
 Pro Asn Phe Asp Gly Leu Glu Ser Asn Pro Tyr Arg Ser Arg Lys Gln
 485 490 495
 Arg Gln Glu Trp Glu Val Lys Ala Leu Leu Glu Lys Val Pro Ala Glu
 500 505 510
 Leu Ile Cys Leu Asp Pro Arg Ala Leu Ala Glu Val Asp Val Ile Ser
 515 520 525
 Leu Glu Gln Gly Lys Lys Glu Gln Ile Glu Arg Leu Gly Tyr Asp Pro
 530 535 540
 Gln Ala Lys Ala Pro Phe Gln Pro Lys Pro Lys Gln Lys Gly Arg Ser
 545 550 555 560
 Ser Thr Ala Ser Leu Val Lys Arg Lys Arg Lys Val Met Asp Glu Glu
 565 570 575
 His Arg Asp Lys Val Arg Gln Ser Leu Gln Gln Gln His His Lys Glu
 580 585 590
 Ala Lys Ala Lys Pro Thr Gly Ala Arg Pro Ser Ala Leu Asp Arg Phe
 595 600 605
 Val Arg *
 610

<210> 1054
 <211> 671
 <212> PRT
 <213> Homo sapiens

<400> 1054
 Met Pro Ala Pro Val Gly Arg Arg Ser Pro Pro Ser Pro Arg Ser Ser
 1 5 10 15
 Met Ala Ala Val Ala Leu Arg Asp Ser Ala Gln Gly Met Thr Phe Glu
 20 25 30
 Asp Val Ala Ile Tyr Phe Ser Gln Glu Glu Trp Glu Leu Leu Asp Glu
 35 40 45
 Ser Gln Arg Phe Leu Tyr Cys Asp Val Met Leu Glu Asn Phe Ala His
 50 55 60

Val	Thr	Ser	Leu	Gly	Tyr	Cys	His	Gly	Met	Glu	Asn	Glu	Ala	Ile	Ala	65	70	75	80
Ser	Glu	Gln	Ser	Val	Ser	Ile	Gln	Val	Arg	Thr	Ser	Lys	Gly	Asn	Thr	85	90	95	
Pro	Thr	Gln	Lys	Thr	His	Leu	Ser	Glu	Ile	Lys	Met	Cys	Val	Pro	Val	100	105	110	
Leu	Lys	Asp	Ile	Leu	Pro	Ala	Ala	Glu	His	Gln	Thr	Thr	Ser	Pro	Val	115	120	125	
Gln	Lys	Ser	Tyr	Leu	Gly	Ser	Thr	Ser	Met	Arg	Gly	Phe	Cys	Phe	Ser	130	135	140	
Ala	Asp	Leu	His	Gln	His	Gln	Lys	His	Tyr	Asn	Glu	Glu	Glu	Pro	Trp	145	150	155	160
Lys	Arg	Lys	Val	Asp	Glu	Ala	Thr	Phe	Val	Thr	Gly	Cys	Arg	Phe	His	165	170	175	
Val	Leu	Asn	Tyr	Phe	Thr	Cys	Gly	Glu	Ala	Phe	Pro	Ala	Pro	Thr	Asp	180	185	190	
Leu	Leu	Gln	His	Glu	Ala	Thr	Pro	Ser	Gly	Glu	Glu	Pro	His	Ser	Ser	195	200	205	
Ser	Ser	Lys	His	Ile	Gln	Ala	Phe	Phe	Asn	Ala	Lys	Ser	Tyr	Tyr	Lys	210	215	220	
Trp	Gly	Glu	Tyr	Arg	Lys	Ala	Ser	Ser	His	Lys	His	Thr	Leu	Val	Gln	225	230	235	240
His	Gln	Ser	Val	Cys	Ser	Glu	Gly	Gly	Leu	Tyr	Glu	Cys	Ser	Lys	Cys	245	250	255	
Glu	Lys	Ala	Phe	Thr	Cys	Lys	Asn	Thr	Leu	Val	Gln	His	Gln	Gln	Ile	260	265	270	
His	Thr	Gly	Gln	Lys	Met	Phe	Glu	Cys	Ser	Glu	Cys	Glu	Glu	Ser	Phe	275	280	285	
Ser	Lys	Lys	Cys	His	Leu	Ile	Leu	His	Lys	Ile	Ile	His	Thr	Gly	Glu	290	295	300	
Arg	Pro	Tyr	Glu	Cys	Ser	Asp	Arg	Glu	Lys	Ala	Phe	Ile	His	Lys	Ser	305	310	315	320
Glu	Phe	Ile	His	His	Gln	Arg	Arg	His	Thr	Gly	Gly	Val	Arg	His	Glu	325	330	335	
Cys	Gly	Glu	Cys	Arg	Lys	Thr	Phe	Ser	Tyr	Lys	Ser	Asn	Leu	Ile	Glu	340	345	350	
His	Gln	Arg	Val	His	Thr	Gly	Glu	Arg	Pro	Tyr	Glu	Cys	Gly	Glu	Cys	355	360	365	
Gly	Lys	Ser	Phe	Arg	Gln	Ser	Ser	Ser	Leu	Phe	Arg	His	Gln	Arg	Val	370	375	380	
His	Ser	Gly	Glu	Arg	Pro	Tyr	Gln	Cys	Cys	Glu	Cys	Gly	Lys	Ser	Phe	385	390	395	400
Arg	Gln	Ile	Phe	Asn	Leu	Ile	Arg	His	Arg	Arg	Val	His	Thr	Gly	Glu	405	410	415	
Met	Pro	Tyr	Gln	Cys	Ser	Asp	Cys	Gly	Lys	Ser	Phe	Ser	Cys	Lys	Ser	420	425	430	
Glu	Leu	Ile	Gln	His	Gln	Arg	Ile	His	Ser	Gly	Glu	Arg	Pro	Tyr	Glu	435	440	445	
Cys	Arg	Glu	Cys	Gly	Lys	Ser	Phe	Arg	Gln	Phe	Ser	Asn	Leu	Ile	Arg	450	455	460	
His	Arg	Ser	Ile	His	Thr	Gly	Asp	Arg	Pro	Tyr	Glu	Cys	Ser	Glu	Cys	465	470	475	480
Glu	Lys	Ser	Phe	Ser	Arg	Lys	Phe	Ile	Leu	Ile	Gln	His	Gln	Arg	Val	485	490	495	
His	Thr	Gly	Glu	Arg	Pro	Tyr	Glu	Cys	Ser	Glu	Cys	Gly	Lys	Ser	Phe	500	505	510	
Thr	Arg	Lys	Ser	Asp	Leu	Ile	Gln	His	Arg	Arg	Ile	His	Thr	Gly	Thr	515	520	525	
Arg	Pro	Tyr	Glu	Cys	Ser	Glu	Cys	Gly	Lys	Ser	Phe	Arg	Gln	Arg	Ser	530	535	540	
Gly	Leu	Ile	Gln	His	Arg	Leu	His	Thr	Gly	Glu	Arg	Pro	Tyr	Glu		545	550	555	560
Cys	Ser	Glu	Cys	Gly	Lys	Ser	Phe	Ser	Gln	Ser	Ala	Ser	Leu	Ile	Gln	565	570	575	

His Gln Arg Val His Thr Gly Glu Arg Pro Tyr Glu Cys Ser Glu Cys
 580 585 590
 Gly Lys Ser Phe Ser Gln Ser Ser Ser Leu Ile Gln His Gln Arg Gly
 595 600 605
 His Thr Gly Glu Arg Pro Tyr Glu Cys Ser Gln Cys Gly Lys Pro Phe
 610 615 620
 Thr His Lys Ser Asp Leu Ile Gln His Gln Arg Val His Thr Gly Glu
 625 630 635 640
 Arg Pro Tyr Glu Cys Ser Glu Cys Gly Lys Ser Phe Ser Arg Lys Ser
 645 650 655
 Asn Leu Ile Arg His Arg Arg Val His Thr Glu Glu Arg Pro *
 660 665 670

<210> 1055
 <211> 798
 <212> PRT
 <213> Homo sapiens

<400> 1055
 Met Ala His Arg Cys Leu Arg Leu Trp Gly Arg Gly Gly Cys Trp Pro
 1 5 10 15
 Arg Gly Leu Gln Gln Leu Leu Val Pro Gly Gly Val Gly Pro Gly Glu
 20 25 30
 Gln Pro Cys Leu Arg Thr Leu Tyr Arg Phe Val Thr Thr Gln Ala Arg
 35 40 45
 Ala Ser Arg Asn Ser Leu Leu Thr Asp Ile Ile Ala Ala Tyr Gln Arg
 50 55 60
 Phe Cys Ser Arg Pro Pro Lys Gly Phe Gly Lys Tyr Phe Pro Asn Gly
 65 70 75 80
 Lys Asn Gly Lys Lys Ala Ser Glu Pro Lys Glu Val Met Gly Glu Lys
 85 90 95
 Lys Glu Ser Lys Pro Ala Ala Thr Thr Arg Ser Ser Gly Gly Gly Gly
 100 105 110
 Gly Gly Gly Gly Lys Arg Gly Gly Lys Lys Asp Asp Ser His Trp Trp
 115 120 125
 Ser Arg Phe Gln Lys Gly Asp Ile Pro Trp Asp Asp Lys Asp Phe Arg
 130 135 140
 Met Phe Phe Leu Trp Thr Ala Leu Phe Trp Gly Gly Val Met Phe Tyr
 145 150 155 160
 Leu Leu Leu Lys Arg Ser Gly Arg Glu Ile Thr Trp Lys Asp Phe Val
 165 170 175
 Asn Asn Tyr Leu Ser Lys Gly Val Val Asp Arg Leu Glu Val Val Asn
 180 185 190
 Lys Arg Phe Val Arg Val Thr Phe Thr Pro Gly Lys Thr Pro Val Asp
 195 200 205
 Gly Gln Tyr Val Trp Phe Asn Ile Gly Ser Val Asp Thr Phe Glu Arg
 210 215 220
 Asn Leu Glu Thr Leu Gln Gln Glu Leu Gly Ile Glu Gly Glu Asn Arg
 225 230 235 240
 Val Pro Val Val Tyr Ile Ala Glu Ser Asp Gly Ser Phe Leu Leu Ser
 245 250 255
 Met Leu Pro Thr Val Leu Ile Ile Ala Phe Leu Leu Tyr Thr Ile Arg
 260 265 270
 Arg Gly Pro Ala Ala Ile Gly Arg Thr Gly Arg Gly Met Gly Gly Leu
 275 280 285
 Phe Ser Val Gly Glu Thr Thr Ala Lys Val Leu Lys Asp Glu Ile Asp
 290 295 300
 Val Lys Phe Lys Asp Val Ala Gly Cys Glu Glu Ala Lys Leu Glu Ile
 305 310 315 320
 Met Glu Phe Val Asn Phe Leu Lys Asn Pro Lys Gln Tyr Gln Asp Leu
 325 330 335

Gly Ala Lys Ile Pro Lys Gly Ala Ile Leu Thr Gly Pro Pro Gly Thr
 340 345 350
 Gly Lys Thr Leu Leu Ala Lys Ala Thr Ala Gly Glu Ala Asn Val Pro
 355 360 365
 Phe Ile Thr Val Ser Gly Ser Glu Phe Leu Glu Met Phe Val Gly Val
 370 375 380
 Gly Pro Ala Arg Val Arg Asp Leu Phe Ala Leu Ala Arg Lys Asn Ala
 385 390 395 400
 Pro Cys Ile Leu Phe Ile Asp Glu Ile Asp Ala Val Gly Arg Lys Arg
 405 410 415
 Gly Arg Gly Asn Phe Gly Gly Gln Ser Glu Gln Glu Asn Thr Leu Asn
 420 425 430
 Gln Leu Leu Val Glu Met Asp Gly Phe Asn Thr Thr Thr Asn Val Val
 435 440 445
 Ile Leu Ala Gly Thr Asn Arg Pro Asp Ile Leu Asp Pro Ala Leu Leu
 450 455 460
 Arg Pro Gly Arg Phe Asp Arg Gln Ile Phe Ile Gly Pro Pro Asp Ile
 465 470 475 480
 Lys Gly Arg Ala Ser Ile Phe Lys Val His Leu Arg Pro Leu Lys Leu
 485 490 495
 Asp Ser Thr Leu Glu Lys Asp Lys Leu Ala Arg Lys Leu Ala Ser Leu
 500 505 510
 Thr Pro Gly Phe Ser Gly Ala Asp Val Ala Asn Val Cys Asn Glu Ala
 515 520 525
 Ala Leu Ile Ala Ala Arg His Leu Ser Asp Ser Ile Asn Gln Lys His
 530 535 540
 Phe Glu Gln Ala Ile Glu Arg Val Ile Gly Gly Leu Glu Lys Lys Thr
 545 550 555 560
 Gln Val Leu Gln Pro Glu Glu Lys Lys Thr Val Ala Tyr His Glu Ala
 565 570 575
 Gly His Ala Val Ala Gly Trp Tyr Leu Glu His Ala Asp Pro Leu Leu
 580 585 590
 Lys Val Ser Ile Ile Pro Arg Gly Lys Gly Leu Gly Tyr Ala Gln Tyr
 595 600 605
 Leu Pro Lys Glu Gln Tyr Leu Tyr Thr Lys Glu Gln Leu Leu Asp Arg
 610 615 620
 Met Cys Met Thr Leu Gly Gly Arg Val Ser Glu Glu Ile Phe Phe Gly
 625 630 635 640
 Arg Ile Thr Thr Gly Ala Gln Asp Asp Leu Arg Lys Val Thr Gln Ser
 645 650 655
 Ala Tyr Ala Gln Ile Val Gln Phe Gly Met Asn Glu Lys Val Gly Gln
 660 665 670
 Ile Ser Phe Asp Leu Pro Arg Gln Gly Asp Met Val Leu Glu Lys Pro
 675 680 685
 Tyr Ser Glu Ala Thr Ala Arg Leu Ile Asp Asp Glu Val Arg Ile Leu
 690 695 700
 Ile Asn Asp Ala Tyr Lys Arg Thr Val Ala Leu Leu Thr Glu Lys Lys
 705 710 715 720
 Ala Asp Val Glu Lys Val Ala Leu Leu Leu Glu Lys Glu Val Leu
 725 730 735
 Asp Lys Asn Asp Met Val Glu Leu Leu Gly Pro Arg Pro Phe Ala Glu
 740 745 750
 Lys Ser Thr Tyr Glu Glu Phe Val Glu Gly Thr Gly Ser Leu Asp Glu
 755 760 765
 Asp Thr Ser Leu Pro Glu Gly Leu Lys Asp Trp Asn Lys Glu Arg Glu
 770 775 780
 Lys Glu Lys Glu Glu Pro Pro Gly Glu Lys Val Ala Asn *
 785 790 795 797

<210> 1056

<211> 387

<212> PRT

<213> Homo sapiens

<400> 1056

```

Met Ser Ala Leu Glu Lys Ser Met His Leu Gly Arg Leu Pro Ser Arg
 1          5          10          15
Pro Pro Leu Pro Gly Ser Gly Gly Ser Gln Ser Gly Ala Lys Met Arg
          20          25          30
Met Gly Pro Gly Arg Lys Arg Asp Phe Ser Pro Val Pro Trp Ser Gln
          35          40          45
Tyr Phe Glu Ser Met Glu Asp Val Glu Val Glu Asn Glu Thr Gly Lys
          50          55          60
Asp Thr Phe Arg Val Tyr Lys Ser Gly Ser Glu Gly Pro Val Leu Leu
 65          70          75          80
Leu Leu His Gly Gly His Ser Ala Leu Ser Trp Ala Val Phe Thr
          85          90          95
Ala Ala Ile Ile Ser Arg Val Gln Cys Arg Ile Val Ala Leu Asp Leu
          100          105          110
Arg Ser His Gly Glu Thr Lys Val Lys Asn Pro Glu Asp Leu Ser Ala
          115          120          125
Glu Thr Met Ala Lys Asp Val Gly Asn Val Val Glu Ala Met Tyr Gly
          130          135          140
Asp Leu Pro Pro Pro Ile Met Leu Ile Gly His Ser Met Gly Gly Ala
          145          150          155          160
Ile Ala Val His Thr Ala Ser Ser Asn Leu Val Pro Ser Leu Leu Gly
          165          170          175
Leu Cys Met Ile Asp Val Val Glu Gly Thr Ala Met Asp Ala Leu Asn
          180          185          190
Ser Met Gln Asn Phe Leu Arg Gly Arg Pro Lys Thr Phe Lys Ser Leu
          195          200          205
Glu Asn Ala Ile Glu Trp Ser Val Lys Ser Gly Gln Ile Arg Asn Leu
          210          215          220
Glu Ser Ala Arg Val Ser Met Val Gly Gln Val Lys Gln Cys Glu Gly
          225          230          235          240
Ile Thr Ser Pro Glu Gly Ser Lys Ser Ile Val Glu Gly Ile Ile Glu
          245          250          255
Glu Glu Glu Glu Asp Glu Glu Gly Ser Glu Ser Ile Ser Lys Arg Lys
          260          265          270
Lys Glu Asp Asp Met Glu Thr Lys Lys Asp His Pro Tyr Thr Trp Arg
          275          280          285
Ile Glu Leu Ala Lys Thr Glu Lys Tyr Trp Asp Gly Trp Phe Arg Gly
          290          295          300
Leu Ser Asn Leu Phe Leu Ser Cys Pro Ile Pro Lys Leu Leu Leu Leu
          305          310          315          320
Ala Gly Val Asp Arg Leu Asp Lys Asp Leu Thr Ile Gly Gln Met Gln
          325          330          335
Gly Lys Phe Gln Met Gln Val Leu Pro Gln Cys Gly His Ala Val His
          340          345          350
Glu Asp Ala Pro Asp Lys Val Ala Glu Ala Val Ala Thr Phe Leu Ile
          355          360          365
Arg His Arg Phe Ala Glu Pro Ile Gly Gly Phe Gln Cys Val Phe Pro
          370          375          380
Gly Cys *
385 386

```

<210> 1057

<211> 56

<212> PRT

<213> Homo sapiens

<400> 1057

Met Gly Arg Pro Arg Asp Arg Lys Glu Leu Gly Arg Gly His Ser Pro
 1 5 10 15
 Pro His Leu Glu Gly Pro His Met Leu Pro Ser Gly Ala Ala Arg Trp
 20 25 30
 Arg Trp Leu Glu Ala Pro Val Leu Val Leu Glu Pro Leu Val Leu Arg
 35 40 45
 Pro Ala Ala Ala Pro Thr Pro *
 50 55

<210> 1058
 <211> 336
 <212> PRT
 <213> Homo sapiens

<400> 1058
 Met Gly Phe Asn Val Glu Glu Met Cys Glu Ala His Ala Trp Ile Gln
 1 5 10 15
 Arg Ile Leu Ser Leu Gln Asn His His Ile Ile Glu Asn Asn His Ile
 20 25 30
 Leu Tyr Leu Gly Arg Lys Glu His Asp Ile Leu Ser Gln Leu Gln Lys
 35 40 45
 Thr Ser Ser Val Ser Ile Thr Glu Ile Ile Ser Pro Gly Arg Thr Glu
 50 55 60
 Leu Glu Ile Glu Gly Ala Arg Ala Asp Leu Ile Glu Val Val Met Asn
 65 70 75 80
 Ile Glu Asp Met Leu Cys Lys Val Gln Glu Glu Met Ala Arg Lys Lys
 85 90 95
 Glu Arg Gly Leu Trp Arg Ser Leu Gly Gln Trp Thr Ile Gln Gln Gln
 100 105 110
 Lys Thr Gln Asp Glu Met Lys Glu Asn Ile Ile Phe Leu Lys Cys Pro
 115 120 125
 Val Pro Pro Thr Gln Glu Leu Asp Gln Lys Lys Gln Phe Glu Lys
 130 135 140
 Cys Gly Leu Gln Val Leu Lys Val Glu Lys Ile Asp Asn Glu Val Leu
 145 150 155 160
 Met Ala Ala Phe Gln Arg Lys Lys Lys Met Met Glu Glu Lys Leu His
 165 170 175
 Arg Gln Pro Val Ser His Arg Leu Phe Gln Gln Val Pro Tyr Gln Phe
 180 185 190
 Cys Asn Val Val Cys Arg Val Gly Phe Gln Arg Met Tyr Ser Thr Pro
 195 200 205
 Cys Asp Pro Lys Tyr Gly Ala Gly Ile Tyr Phe Thr Lys Asn Leu Lys
 210 215 220
 Asn Leu Ala Glu Lys Ala Lys Lys Ile Ser Ala Ala Asp Lys Leu Ile
 225 230 235 240
 Tyr Val Phe Glu Ala Glu Val Leu Thr Gly Phe Phe Cys Gln Gly His
 245 250 255
 Pro Leu Asn Ile Val Pro Pro Pro Leu Ser Pro Gly Ala Ile Asp Gly
 260 265 270
 His Asp Ser Val Val Asp Asn Val Ser Ser Pro Glu Thr Phe Val Ile
 275 280 285
 Phe Ser Gly Met Gln Ala Ile Pro Gln Tyr Leu Trp Thr Cys Thr Gln
 290 295 300
 Glu Tyr Val Gln Ser Gln Asp Tyr Ser Ser Gly Pro Met Arg Pro Phe
 305 310 315 320
 Ala Gln His Pro Trp Arg Gly Phe Ala Ser Gly Ser Pro Val Asp *
 325 330 335

<210> 1059

<211> 147
 <212> PRT
 <213> Homo sapiens

<400> 1059
 Met Gly Phe Ile Phe Ser Lys Ser Met Asn Glu Ser Met Lys Asn Gln
 1 5 10 15
 Lys Glu Phe Met Leu Met Asn Ala Arg Leu Gln Leu Glu Arg Gln Leu
 20 25 30
 Ile Met Gln Ser Glu Met Arg Glu Arg Gln Met Ala Met Gln Ile Ala
 35 40 45
 Trp Ser Arg Glu Phe Leu Lys Tyr Phe Gly Thr Phe Phe Gly Leu Ala
 50 55 60
 Ala Ile Ser Leu Thr Ala Gly Ala Ile Lys Lys Lys Lys Pro Ala Phe
 65 70 75 80
 Leu Val Pro Ile Val Pro Leu Ser Phe Ile Leu Thr Tyr Gln Tyr Asp
 85 90 95
 Leu Gly Tyr Gly Thr Leu Leu Glu Arg Met Lys Gly Glu Ala Glu Asp
 100 105 110
 Ile Leu Glu Thr Glu Lys Ser Lys Leu Gln Leu Pro Arg Gly Met Ile
 115 120 125
 Thr Phe Glu Ser Ile Glu Lys Ala Arg Lys Glu Gln Ser Arg Phe Phe
 130 135 140
 Ile Asp Lys
 145 147

<210> 1060
 <211> 91
 <212> PRT
 <213> Homo sapiens

<400> 1060
 Met Lys Met Leu Trp Lys Leu Thr Asp Asn Ile Lys Tyr Glu Asp Cys
 1 5 10 15
 Glu Val Ser Ala Thr Pro Ala Arg Ser Ser Val Arg Ser Gln Ala Pro
 20 25 30
 Ser Leu Thr Leu Pro Leu Leu Leu Ser Leu Gln Pro Ala Ala Lys
 35 40 45
 Arg Gly Trp Asp Lys Leu Ser Pro Ala Gln Arg Pro Ser Leu Gly Phe
 50 55 60
 Ala Arg Arg Thr Arg Gly Arg Ser Cys Arg Glu Arg Thr Trp Met Leu
 65 70 75 80
 Pro Ser Leu Val Ser Glu Phe Leu His Arg Asp
 85 90 91

<210> 1061
 <211> 254
 <212> PRT
 <213> Homo sapiens

<400> 1061
 Met Ile Ser Ser Asn Thr Ser Tyr Leu Ser Ser Arg Gly Arg Met Ile
 1 5 10 15
 Lys Trp Phe Trp Asp Ser Ala Glu Glu Gly Tyr Arg Thr Tyr His Met
 20 25 30
 Asp Glu Tyr Asp Glu Asp Lys Asn Pro Ser Gly Ile Ile Asn Leu Gly
 35 40 45

```

Thr Ser Glu Asn Lys Leu Cys Phe Asp Leu Leu Ser Trp Arg Leu Ser
  50          55          60
Gln Arg Asp Met Gln Arg Val Glu Pro Ser Leu Leu Gln Tyr Ala Asp
  65          70          75          80
Trp Arg Gly His Leu Phe Leu Arg Glu Glu Val Ala Lys Phe Leu Ser
          85          90          95
Phe Tyr Cys Lys Ser Pro Val Pro Leu Arg Pro Glu Asn Val Val Val
          100          105          110
Leu Asn Gly Gly Ala Ser Leu Phe Ser Ala Leu Ala Thr Val Leu Cys
          115          120          125
Glu Ala Gly Glu Ala Phe Leu Ile Pro Thr Pro Tyr Tyr Gly Ala Ile
          130          135          140
Thr Gln His Val Cys Leu Tyr Gly Asn Ile Arg Leu Ala Tyr Val Tyr
          145          150          155          160
Leu Asp Ser Glu Val Thr Gly Leu Asp Thr Arg Pro Phe Gln Leu Thr
          165          170          175
Val Glu Lys Leu Glu Met Ala Leu Arg Glu Ala His Ser Glu Gly Val
          180          185          190
Lys Val Lys Gly Leu Ile Leu Ile Ser Pro Gln Asn Pro Leu Gly Asp
          195          200          205
Val Tyr Ser Pro Glu Glu Leu Gln Glu Tyr Leu Val Phe Ala Lys Arg
          210          215          220
His Arg Leu His Val Ile Val Asp Glu Val Tyr Met Leu Ser Val Phe
          225          230          235          240
Glu Lys Ser Val Gly Tyr Arg Ser Val Leu Ser Leu Glu Arg
          245          250          254

```

<210> 1062
 <211> 166
 <212> PRT
 <213> Homo sapiens

```

<400> 1062
Met Ala Val Ser Thr Val Phe Ser Thr Ser Ser Leu Met Leu Ala Leu
  1          5          10          15
Ser Arg His Ser Leu Leu Ser Pro Leu Leu Ser Val Thr Ser Phe Arg
          20          25          30
Arg Phe Tyr Arg Gly Asp Ser Pro Thr Asp Ser Gln Lys Asp Met Ile
          35          40          45
Glu Ile Pro Leu Pro Pro Trp Gln Glu Arg Thr Asp Glu Ser Ile Glu
          50          55          60
Thr Lys Arg Ala Arg Leu Leu Tyr Glu Ser Arg Lys Arg Gly Met Leu
          65          70          75          80
Glu Asn Cys Ile Leu Leu Ser Leu Phe Ala Lys Glu His Leu Gln His
          85          90          95
Met Thr Glu Lys Gln Leu Asn Leu Tyr Asp Arg Leu Ile Asn Glu Pro
          100          105          110
Ser Asn Asp Trp Asp Ile Tyr Tyr Trp Ala Thr Glu Ala Lys Pro Ala
          115          120          125
Pro Glu Ile Phe Glu Asn Glu Val Met Ala Leu Leu Arg Asp Phe Ala
          130          135          140
Lys Asn Lys Asn Lys Glu Gln Arg Leu Arg Ala Pro Asp Leu Glu Tyr
          145          150          155          160
Leu Phe Glu Lys Pro Arg
          165 166

```

<210> 1063
 <211> 291
 <212> PRT

<213> Homo sapiens

<400> 1063

```

Met Arg Asn Val Lys Lys Gln Asp Pro Leu Val Gln Cys Gly Gly Ile
 1          5          10          15
Leu His Ser Leu Trp Pro Trp Ile Leu Met Asp Asp Ser Leu Met Gln
      20          25          30
Ile Ser Leu Gln Leu Leu Cys Val Tyr Thr Ala Asn Phe Pro Asn Gly
      35          40          45
Cys Ser Ser Leu Cys Trp Ser Ser Cys Gly Gln His Pro Val Gln Ala
      50          55          60
Thr His Arg Gly Ala Val Ser Asn Ser Leu Met Leu Cys Ile Leu Lys
      65          70          75          80
Leu Ala Ser Gln Met Pro Leu Glu Asn Thr Thr Val Gln Gln Met Val
      85          90          95
Phe Met Leu Leu Ser Asn Leu Ala Leu Ser His Asp Cys Lys Gly Val
      100          105          110
Ile Gln Lys Ser Asn Phe Leu Gln Asn Phe Leu Ser Leu Ala Leu Pro
      115          120          125
Lys Gly Gly Asn Lys His Leu Ser Asn Leu Thr Ile Leu Trp Leu Lys
      130          135          140
Leu Leu Leu Asn Ile Ser Ser Gly Glu Asp Gly Gln Gln Met Ile Leu
      145          150          155          160
Arg Leu Asp Gly Cys Leu Asp Leu Leu Thr Glu Met Ser Lys Tyr Lys
      165          170          175
His Lys Ser Ser Pro Leu Leu Pro Leu Leu Ile Phe His Asn Val Cys
      180          185          190
Phe Ser Pro Ala Asn Lys Pro Lys Ile Leu Ala Asn Glu Lys Val Ile
      195          200          205
Thr Val Leu Ala Ala Cys Leu Glu Ser Glu Asn Gln Asn Ala Gln Arg
      210          215          220
Ile Gly Ala Ala Ala Leu Trp Ala Leu Ile Tyr Asn Tyr Gln Lys Ala
      225          230          235          240
Lys Thr Ala Leu Lys Ser Pro Ser Val Lys Arg Arg Val Asp Glu Ala
      245          250          255
Tyr Ser Leu Ala Lys Lys Thr Phe Pro Asn Ser Glu Ala Asn Pro Leu
      260          265          270
Asn Ala Tyr Tyr Leu Lys Cys Leu Glu Asn Leu Val Gln Leu Leu Asn
      275          280          285
Ser Ser *
      290

```

<210> 1064

<211> 401

<212> PRT

<213> Homo sapiens

<400> 1064

```

Met Gly Lys Asn Pro Val Arg Pro Pro Arg Ala Leu Pro Pro Val Pro
 1          5          10          15
Ser Gln Asp Asp Ile Pro Leu Ser Arg Pro Lys Lys Lys Lys Pro Arg
      20          25          30
Thr Lys Asn Thr Pro Ala Ser Ala Ser Leu Glu Gly Leu Ala Gln Thr
      35          40          45
Ala Gly Arg Arg Pro Ser Glu Gly Asn Glu Pro Ser Thr Lys Glu Leu
      50          55          60
Lys Glu His Pro Glu Ala Pro Val Gln Arg Arg Gln Lys Lys Thr Arg
      65          70          75          80
Leu Pro Leu Glu Leu Glu Thr Ser Ser Thr Gln Lys Lys Ser Ser Ser
      85          90          95

```

```

Ser Ser Leu Leu Arg Asn Glu Asn Gly Ile Asp Ala Glu Pro Ala Glu
      100      105      110
Glu Ala Val Ile Gln Lys Pro Arg Arg Lys Thr Lys Lys Thr Gln Pro
      115      120      125
Ala Glu Leu Gln Tyr Ala Asn Glu Leu Gly Val Glu Asp Glu Asp Ile
      130      135      140
Ile Thr Asp Glu Gln Thr Thr Val Glu Gln Gln Ser Val Phe Thr Ala
      145      150      155      160
Pro Thr Gly Ile Ser Gln Pro Val Gly Lys Val Phe Val Glu Lys Ser
      165      170      175
Arg Arg Phe Gln Ala Ala Asp Arg Ser Glu Leu Ile Lys Thr Thr Glu
      180      185      190
Asn Ile Asp Val Ser Met Asp Val Lys Pro Ser Trp Thr Thr Arg Asp
      195      200      205
Val Ala Leu Thr Val His Arg Ala Phe Arg Met Ile Gly Leu Phe Ser
      210      215      220
His Gly Phe Leu Ala Gly Cys Ala Val Trp Asn Ile Val Val Ile Tyr
      225      230      235      240
Val Leu Ala Gly Asp Gln Leu Ser Asn Leu Ser Asn Leu Leu Gln Gln
      245      250      255
Tyr Lys Thr Leu Ala Tyr Pro Phe Gln Ser Leu Leu Tyr Leu Leu Leu
      260      265      270
Ala Leu Ser Thr Ile Ser Ala Phe Asp Arg Ile Asp Phe Ala Lys Ile
      275      280      285
Ser Val Ala Ile Arg Asn Phe Leu Ala Leu Asp Pro Thr Ala Leu Ala
      290      295      300
Ser Phe Leu Tyr Phe Thr Ala Leu Ile Leu Ser Leu Ser Gln Gln Met
      305      310      315      320
Thr Ser Asp Arg Ile His Leu Tyr Thr Pro Ser Ser Val Asn Gly Ser
      325      330      335
Leu Trp Glu Ala Gly Ile Glu Glu Gln Ile Leu Gln Pro Trp Ile Val
      340      345      350
Val Asn Leu Val Val Ala Leu Leu Val Gly Leu Ser Trp Leu Phe Leu
      355      360      365
Ser Tyr Arg Pro Gly Met Asp Leu Ser Glu Glu Leu Met Phe Ser Ser
      370      375      380
Glu Val Glu Glu Tyr Pro Asp Lys Glu Lys Glu Ile Lys Ala Ser Ser
      385      390      395      400

```

*

```

<210> 1065
<211> 367
<212> PRT
<213> Homo sapiens

```

```

<400> 1065
Met Ser Leu His Gly Ala Ser Gly Gly His Glu Arg Ser Arg Asp Arg
  1      5      10      15
Arg Arg Ser Ser Asp Arg Ser Arg Asp Ser Ser His Glu Arg Thr Glu
      20      25      30
Ser Gln Leu Thr Pro Cys Ile Arg Asn Val Thr Ser Pro Thr Arg Gln
      35      40      45
His His Val Glu Arg Glu Lys Asp His Ser Ser Ser Arg Pro Ser Ser
      50      55      60
Pro Arg Pro Gln Lys Ala Ser Pro Asn Gly Ser Ile Ser Ser Ala Gly
      65      70      75      80
Asn Ser Ser Arg Asn Ser Ser Gln Ser Ser Ser Asp Gly Ser Cys Lys
      85      90      95
Thr Ala Gly Glu Met Val Phe Val Tyr Glu Asn Ala Lys Glu Gly Ala
      100      105      110

```

Arg	Asn	Ile	Arg	Thr	Ser	Glu	Arg	Val	Thr	Leu	Ile	Val	Asp	Asn	Thr
	115						120					125			
Arg	Phe	Val	Val	Asp	Pro	Ser	Ile	Phe	Thr	Ala	Gln	Pro	Asn	Thr	Met
	130					135					140				
Leu	Gly	Arg	Met	Phe	Gly	Ser	Gly	Arg	Glu	His	Asn	Phe	Thr	Arg	Pro
145					150					155					160
Asn	Glu	Lys	Gly	Glu	Tyr	Glu	Val	Ala	Glu	Gly	Ile	Gly	Ser	Thr	Val
			165						170					175	
Phe	Arg	Ala	Ile	Leu	Asp	Tyr	Tyr	Lys	Thr	Gly	Ile	Ile	Arg	Cys	Pro
		180						185					190		
Asp	Gly	Ile	Ser	Ile	Pro	Glu	Leu	Arg	Glu	Ala	Cys	Asp	Tyr	Leu	Cys
	195					200						205			
Ile	Ser	Phe	Glu	Tyr	Ser	Thr	Ile	Lys	Cys	Arg	Asp	Leu	Ser	Ala	Leu
	210					215					220				
Met	His	Glu	Leu	Ser	Asn	Asp	Gly	Ala	Arg	Arg	Gln	Phe	Glu	Phe	Tyr
225					230					235					240
Leu	Glu	Glu	Met	Ile	Leu	Pro	Leu	Met	Val	Ala	Ser	Ala	Gln	Ser	Gly
			245						250					255	
Glu	Arg	Glu	Cys	His	Ile	Val	Val	Leu	Thr	Asp	Asp	Asp	Val	Val	Asp
		260						265					270		
Trp	Asp	Glu	Glu	Tyr	Pro	Pro	Gln	Met	Gly	Glu	Glu	Tyr	Ser	Gln	Ile
	275						280					285			
Ile	Tyr	Ser	Thr	Lys	Leu	Tyr	Arg	Phe	Phe	Lys	Tyr	Ile	Glu	Asn	Arg
	290					295					300				
Asp	Val	Ala	Lys	Ser	Val	Leu	Lys	Glu	Arg	Gly	Leu	Lys	Lys	Ile	Arg
305					310					315					320
Leu	Gly	Ile	Glu	Gly	Tyr	Pro	Thr	Tyr	Lys	Glu	Lys	Val	Lys	Lys	Arg
			325						330					335	
Pro	Gly	Gly	Ala	Pro	Arg	Ser	Asp	Leu	Gln	Leu	Cys	Pro	Lys	Thr	Leu
		340					345					350			
Tyr	Ser	Asn	Val	Leu	Gly	Arg	Arg	Lys	Lys	Glu	Arg	Val	Gly	Met	
	355					360						365		367	

<210> 1066
 <211> 634
 <212> PRT
 <213> Homo sapiens

<400> 1066

Met	Gln	Gly	Gly	Asn	Ser	Gly	Val	Arg	Lys	Arg	Glu	Glu	Glu	Gly	Asp
1				5					10					15	
Gly	Ala	Gly	Ala	Val	Ala	Ala	Pro	Pro	Ala	Ile	Asp	Phe	Pro	Ala	Glu
		20					25					30			
Gly	Pro	Asp	Pro	Glu	Tyr	Asp	Glu	Ser	Asp	Val	Pro	Ala	Glu	Ile	Gln
	35					40					45				
Val	Leu	Lys	Glu	Pro	Leu	Gln	Gln	Pro	Thr	Phe	Pro	Phe	Ala	Val	Ala
	50				55				60						
Asn	Gln	Leu	Leu	Leu	Val	Ser	Leu	Leu	Glu	His	Leu	Ser	His	Val	His
65				70					75					80	
Glu	Pro	Asn	Pro	Leu	Arg	Ser	Arg	Gln	Val	Phe	Lys	Leu	Leu	Cys	Gln
		85					90					95			
Thr	Phe	Ile	Lys	Met	Gly	Leu	Leu	Ser	Ser	Phe	Thr	Cys	Ser	Asp	Glu
		100					105					110			
Phe	Ser	Ser	Leu	Arg	Leu	His	His	Asn	Arg	Ala	Ile	Thr	His	Leu	Met
	115					120						125			
Arg	Ser	Ala	Lys	Glu	Arg	Val	Arg	Gln	Asp	Pro	Cys	Glu	Asp	Ile	Ser
	130				135						140				
Arg	Ile	Gln	Lys	Ile	Arg	Ser	Arg	Glu	Val	Ala	Leu	Glu	Ala	Gln	Thr
145				150					155						160
Ser	Arg	Tyr	Leu	Asn	Glu	Phe	Glu	Glu	Leu	Ala	Ile	Leu	Gly	Lys	Gly
			165					170						175	

Gly	Tyr	Gly	Arg	Val	Tyr	Lys	Val	Val	Phe	His	Val	Arg	Asn	Lys	Leu
			180					185					190		
Asp	Gly	Gln	Tyr	Tyr	Ala	Ile	Lys	Lys	Ile	Leu	Ile	Lys	Gly	Ala	Thr
		195					200					205			
Lys	Thr	Val	Cys	Met	Lys	Val	Leu	Arg	Glu	Val	Lys	Val	Leu	Ala	Gly
	210					215					220				
Leu	Gln	His	Pro	Asn	Ile	Val	Gly	Tyr	His	Thr	Ala	Trp	Ile	Glu	His
225				230					235					240	
Val	His	Val	Ile	Gln	Pro	Arg	Ala	Asp	Arg	Ala	Ala	Ile	Glu	Leu	Pro
			245					250					255		
Ser	Leu	Glu	Val	Leu	Ser	Asp	Gln	Glu	Glu	Asp	Arg	Glu	Gln	Cys	Gly
		260					265					270			
Val	Lys	Asn	Asp	Glu	Ser	Ser	Ser	Ser	Ser	Ile	Ile	Phe	Ala	Glu	Pro
	275						280					285			
Thr	Pro	Glu	Lys	Glu	Lys	Arg	Phe	Gly	Glu	Ser	Asp	Thr	Glu	Asn	Gln
	290					295					300				
Asn	Asn	Lys	Ser	Val	Lys	Tyr	Thr	Thr	Asn	Leu	Val	Ile	Arg	Glu	Ser
305				310					315					320	
Gly	Glu	Leu	Glu	Ser	Thr	Leu	Glu	Leu	Gln	Glu	Asn	Gly	Leu	Ala	Gly
			325					330					335		
Leu	Ser	Ala	Ser	Ser	Ile	Val	Glu	Gln	Gln	Leu	Pro	Leu	Arg	Arg	Asn
		340					345						350		
Ser	His	Leu	Glu	Glu	Ser	Phe	Thr	Ser	Thr	Glu	Glu	Ser	Ser	Glu	Glu
	355					360				365					
Asn	Val	Asn	Phe	Leu	Gly	Gln	Thr	Glu	Ala	Gln	Tyr	His	Leu	Met	Leu
370					375				380						
His	Ile	Gln	Met	Gln	Leu	Cys	Glu	Leu	Ser	Leu	Trp	Asp	Trp	Ile	Val
385				390					395					400	
Glu	Arg	Asn	Lys	Arg	Gly	Arg	Glu	Tyr	Val	Asp	Glu	Ser	Ala	Cys	Pro
			405					410					415		
Tyr	Val	Met	Ala	Asn	Val	Ala	Thr	Lys	Ile	Phe	Gln	Glu	Leu	Val	Glu
		420						425				430			
Gly	Val	Phe	Tyr	Ile	His	Asn	Met	Gly	Ile	Val	His	Arg	Asp	Leu	Lys
	435					440					445				
Pro	Arg	Asn	Ile	Phe	Leu	His	Gly	Pro	Asp	Gln	Gln	Val	Lys	Ile	Gly
	450					455				460					
Asp	Phe	Gly	Leu	Ala	Cys	Thr	Asp	Ile	Leu	Gln	Lys	Asn	Thr	Asp	Trp
465				470					475				480		
Thr	Asn	Arg	Asn	Gly	Lys	Arg	Thr	Pro	Thr	His	Thr	Ser	Arg	Val	Gly
			485					490					495		
Thr	Cys	Leu	Tyr	Ala	Ser	Pro	Glu	Gln	Leu	Glu	Gly	Ser	Glu	Tyr	Asp
		500					505					510			
Ala	Lys	Ser	Asp	Met	Tyr	Ser	Leu	Gly	Val	Val	Leu	Leu	Glu	Leu	Phe
	515						520				525				
Gln	Pro	Phe	Gly	Thr	Glu	Met	Glu	Arg	Ala	Glu	Val	Leu	Thr	Gly	Leu
	530					535				540					
Arg	Thr	Gly	Gln	Leu	Pro	Glu	Ser	Leu	Arg	Lys	Arg	Cys	Pro	Val	Gln
545				550					555				560		
Ala	Lys	Tyr	Ile	Gln	His	Leu	Thr	Arg	Arg	Asn	Ser	Ser	Gln	Arg	Pro
			565					570					575		
Ser	Ala	Ile	Gln	Leu	Leu	Gln	Ser	Glu	Leu	Phe	Gln	Asn	Ser	Gly	Asn
		580					585					590			
Val	Asn	Leu	Thr	Leu	Gln	Met	Lys	Ile	Ile	Glu	Gln	Glu	Lys	Glu	Ile
	595					600					605				
Ala	Glu	Leu	Lys	Lys	Gln	Leu	Asn	Leu	Leu	Ser	Gln	Asp	Lys	Gly	Val
	610				615						620				
Arg	Asp	Asp	Gly	Lys	Asp	Gly	Gly	Val	Gly						
625					630				634						

<210> 1067

<211> 320

<212> PRT

<213> Homo sapiens

<400> 1067

```

Met Lys Ile Glu Leu Ser Met Gln Pro Trp Asn Pro Gly Tyr Ser Ser
 1          5          10          15
Glu Gly Ala Thr Ala Gln Glu Thr Tyr Thr Cys Pro Lys Met Ile Glu
          20          25          30
Met Glu Gln Ala Glu Ala Gln Leu Ala Glu Leu Asp Leu Leu Ala Ser
          35          40          45
Met Phe Pro Gly Glu Asn Glu Leu Ile Val Asn Asp Gln Leu Ala Val
          50          55          60
Ala Glu Leu Lys Asp Cys Ile Glu Lys Lys Thr Met Glu Gly Arg Ser
          65          70          75          80
Ser Lys Val Tyr Phe Thr Ile Asn Met Asn Leu Asp Val Ser Asp Glu
          85          90          95
Lys Met Ala Met Phe Ser Leu Ala Cys Ile Leu Pro Phe Lys Tyr Pro
          100          105          110
Ala Val Leu Pro Glu Ile Thr Val Arg Ser Val Leu Leu Ser Arg Ser
          115          120          125
Gln Gln Thr Gln Leu Asn Thr Asp Leu Thr Ala Phe Leu Gln Lys His
          130          135          140
Cys His Gly Asp Val Cys Ile Leu Asn Ala Thr Glu Trp Val Arg Glu
          145          150          155          160
His Ala Ser Gly Tyr Val Ser Arg Asp Thr Ser Ser Ser Pro Thr Thr
          165          170          175
Gly Ser Thr Val Gln Ser Val Asp Leu Ile Phe Thr Arg Leu Trp Ile
          180          185          190
Tyr Ser His His Ile Tyr Asn Lys Cys Lys Arg Lys Asn Ile Leu Glu
          195          200          205
Trp Ala Lys Glu Leu Ser Leu Ser Gly Phe Ser Met Pro Gly Lys Pro
          210          215          220
Gly Val Val Cys Val Glu Gly Pro Gln Ser Ala Cys Glu Glu Phe Trp
          225          230          235          240
Ser Arg Leu Arg Lys Leu Asn Trp Lys Arg Ile Leu Ile Arg His Arg
          245          250          255
Glu Asp Ile Pro Phe Asp Gly Thr Asn Asp Glu Thr Glu Arg Gln Arg
          260          265          270
Lys Phe Ser Ile Phe Glu Glu Lys Val Phe Ser Val Asn Gly Ala Arg
          275          280          285
Gly Asn His Met Asp Phe Gly Gln Leu Tyr Gln Phe Leu Asn Thr Lys
          290          295          300
Gly Cys Gly Asp Val Phe Gln Met Phe Phe Gly Val Glu Gly Gln *
          305          310          315          319

```

<210> 1068

<211> 744

<212> PRT

<213> Homo sapiens

<400> 1068

```

Met Ala Gly Arg Ser Met Gln Ala Ala Arg Cys Pro Thr Asp Glu Leu
 1          5          10          15
Ser Leu Thr Asn Cys Ala Val Val Asn Glu Lys Asp Phe Gln Ser Gly
          20          25          30
Gln His Val Ile Val Arg Thr Ser Pro Asn His Arg Tyr Thr Phe Thr
          35          40          45
Leu Lys Thr His Pro Ser Val Val Pro Gly Ser Ile Ala Phe Ser Leu
          50          55          60
Pro Gln Arg Lys Trp Ala Gly Leu Ser Ile Gly Gln Glu Ile Glu Val
          65          70          75          80

```

Ser	Leu	Tyr	Thr	Phe	Asp	Lys	Ala	Lys	Gln	Cys	Ile	Gly	Thr	Met	Thr	85	90	95
Ile	Glu	Ile	Asp	Phe	Leu	Gln	Lys	Lys	Ser	Ile	Asp	Ser	Asn	Pro	Tyr	100	105	110
Asp	Thr	Asp	Lys	Met	Ala	Ala	Glu	Phe	Ile	Gln	Gln	Phe	Asn	Asn	Gln	115	120	125
Ala	Phe	Ser	Val	Gly	Gln	Gln	Leu	Val	Phe	Ser	Phe	Asn	Glu	Lys	Leu	130	135	140
Phe	Gly	Leu	Leu	Val	Lys	Asp	Ile	Glu	Ala	Met	Asp	Pro	Ser	Ile	Leu	145	150	155
Lys	Gly	Glu	Pro	Ala	Thr	Gly	Lys	Arg	Gln	Lys	Ile	Glu	Val	Gly	Leu	165	170	175
Val	Val	Gly	Asn	Ser	Gln	Val	Ala	Phe	Glu	Lys	Ala	Glu	Asn	Ser	Ser	180	185	190
Leu	Asn	Leu	Ile	Gly	Lys	Ala	Lys	Thr	Lys	Glu	Asn	Arg	Gln	Ser	Ile	195	200	205
Ile	Asn	Pro	Asp	Trp	Asn	Phe	Glu	Lys	Met	Gly	Ile	Gly	Gly	Leu	Asp	210	215	220
Lys	Glu	Phe	Ser	Asp	Ile	Phe	Arg	Arg	Ala	Phe	Ala	Ser	Arg	Val	Phe	225	230	235
Pro	Pro	Glu	Ile	Val	Glu	Gln	Met	Gly	Cys	Lys	His	Val	Lys	Gly	Ile	245	250	255
Leu	Leu	Tyr	Gly	Pro	Pro	Gly	Cys	Gly	Lys	Thr	Leu	Leu	Ala	Arg	Gln	260	265	270
Ile	Gly	Lys	Met	Leu	Asn	Ala	Arg	Glu	Pro	Lys	Val	Val	Asn	Gly	Pro	275	280	285
Glu	Ile	Leu	Asn	Lys	Tyr	Val	Gly	Glu	Ser	Glu	Ala	Asn	Ile	Arg	Lys	290	295	300
Leu	Phe	Ala	Asp	Ala	Glu	Glu	Glu	Gln	Arg	Arg	Leu	Gly	Ala	Asn	Ser	305	310	315
Gly	Leu	His	Ile	Ile	Ile	Phe	Asp	Glu	Ile	Asp	Ala	Ile	Cys	Lys	Gln	325	330	335
Arg	Gly	Ser	Met	Ala	Gly	Ser	Thr	Gly	Val	His	Asp	Thr	Val	Val	Asn	340	345	350
Gln	Leu	Leu	Ser	Lys	Ile	Asp	Gly	Val	Glu	Gln	Leu	Asn	Asn	Ile	Leu	355	360	365
Val	Ile	Gly	Met	Thr	Asn	Arg	Pro	Asp	Leu	Ile	Asp	Glu	Ala	Leu	Leu	370	375	380
Arg	Pro	Gly	Arg	Leu	Glu	Val	Lys	Met	Glu	Ile	Gly	Leu	Pro	Asp	Glu	385	390	395
Lys	Gly	Arg	Leu	Gln	Ile	Leu	His	Ile	His	Thr	Ala	Arg	Met	Arg	Gly	405	410	415
His	Gln	Leu	Leu	Ser	Ala	Asp	Val	Asp	Ile	Lys	Glu	Leu	Ala	Val	Glu	420	425	430
Thr	Lys	Asn	Phe	Ser	Gly	Ala	Glu	Leu	Glu	Gly	Leu	Val	Arg	Ala	Ala	435	440	445
Gln	Ser	Thr	Ala	Met	Asn	Arg	His	Ile	Lys	Ala	Ser	Thr	Lys	Val	Glu	450	455	460
Val	Asp	Met	Glu	Lys	Ala	Glu	Ser	Leu	Gln	Val	Thr	Arg	Gly	Asp	Phe	465	470	475
Leu	Ala	Ser	Leu	Glu	Asn	Asp	Ile	Lys	Pro	Ala	Phe	Gly	Thr	Asn	Gln	485	490	495
Glu	Asp	Tyr	Ala	Ser	Tyr	Ile	Met	Asn	Gly	Ile	Ile	Lys	Trp	Gly	Asp	500	505	510
Pro	Val	Thr	Arg	Val	Leu	Asp	Asp	Gly	Glu	Leu	Leu	Val	Gln	Gln	Thr	515	520	525
Lys	Asn	Ser	Asp	Arg	Thr	Pro	Leu	Val	Ser	Val	Leu	Leu	Glu	Gly	Pro	530	535	540
Pro	His	Ser	Gly	Lys	Thr	Ala	Leu	Ala	Ala	Lys	Ile	Ala	Glu	Glu	Ser	545	550	555
Asn	Phe	Pro	Phe	Ile	Lys	Ile	Cys	Ser	Pro	Asp	Lys	Met	Ile	Gly	Phe	565	570	575
Ser	Glu	Thr	Ala	Lys	Cys	Gln	Ala	Met	Lys	Lys	Ile	Phe	Asp	Asp	Ala	580	585	590

Tyr Lys Ser Gln Leu Ser Cys Val Val Val Asp Asp Ile Glu Arg Leu
 595 600 605
 Leu Asp Tyr Val Pro Ile Gly Pro Arg Phe Ser Asn Leu Val Leu Gln
 610 615 620
 Ala Leu Leu Val Leu Leu Lys Lys Ala Pro Pro Gln Gly Arg Lys Leu
 625 630 635 640
 Leu Ile Ile Gly Thr Thr Ser Arg Lys Asp Val Leu Gln Glu Met Glu
 645 650 655
 Met Leu Asn Ala Phe Ser Thr Thr Ile His Val Pro Asn Ile Ala Thr
 660 665 670
 Gly Glu Gln Leu Leu Glu Ala Leu Glu Leu Leu Gly Asn Phe Lys Asp
 675 680 685
 Lys Glu Arg Thr Thr Ile Ala Gln Gln Val Lys Gly Lys Lys Val Trp
 690 695 700
 Ile Gly Ile Lys Lys Leu Leu Met Leu Ile Glu Met Ser Leu Gln Met
 705 710 715 720
 Asp Pro Glu Tyr Arg Val Arg Lys Phe Leu Ala Leu Leu Arg Glu Glu
 725 730 735
 Gly Ala Ser Pro Leu Asp Phe Asp
 740 744

<210> 1069
 <211> 291
 <212> PRT
 <213> Homo sapiens

<400> 1069
 Met Gly Asp Gly Gly Ala Glu Arg Asp Arg Gly Pro Ala Arg Arg Ala
 1 5 10 15
 Glu Ser Gly Gly Gly Gly Gly Arg Cys Gly Asp Arg Ser Gly Ala Gly
 20 25 30
 Asp Leu Arg Ala Asp Gly Gly Gly His Ser Pro Thr Glu Val Ala Gly
 35 40 45
 Thr Ser Ala Ser Ser Pro Ala Gly Ser Arg Glu Ser Gly Ala Asp Ser
 50 55 60
 Asp Gly Gln Pro Gly Pro Gly Glu Ala Asp His Cys Arg Arg Ile Leu
 65 70 75 80
 Val Arg Asp Ala Lys Gly Thr Ile Arg Glu Ile Val Leu Pro Lys Gly
 85 90 95
 Leu Asp Leu Asp Arg Pro Lys Arg Thr Arg Thr Ser Phe Thr Ala Glu
 100 105 110
 Gln Leu Tyr Arg Leu Glu Met Glu Phe Gln Arg Cys Gln Tyr Val Val
 115 120 125
 Gly Arg Glu Arg Thr Glu Leu Ala Arg Gln Leu Asn Leu Ser Glu Thr
 130 135 140
 Gln Val Lys Val Trp Phe Gln Asn Arg Arg Thr Lys Gln Lys Lys Asp
 145 150 155 160
 Gln Ser Arg Asp Leu Glu Lys Arg Ala Ser Ser Ser Ala Ser Glu Ala
 165 170 175
 Phe Ala Thr Ser Asn Ile Leu Arg Leu Leu Glu Gln Gly Arg Leu Leu
 180 185 190
 Ser Val Pro Arg Ala Pro Ser Leu Leu Ala Leu Thr Pro Ser Leu Pro
 195 200 205
 Gly Leu Pro Ala Ser His Arg Gly Thr Ser Leu Gly Asp Pro Arg Asn
 210 215 220
 Ser Ser Pro Arg Leu Asn Pro Leu Ser Ser Ala Ser Ala Ser Pro Pro
 225 230 235 240
 Leu Pro Pro Pro Leu Pro Ala Val Cys Phe Ser Ser Ala Pro Leu Leu
 245 250 255
 Asp Leu Pro Ala Gly Tyr Glu Leu Gly Ser Ser Ala Phe Glu Pro Tyr
 260 265 270

Ser Trp Leu Glu Arg Lys Val Gly Ser Ala Ser Ser Cys Lys Lys Ala
 275 280 285
 Asn Thr *
 290

<210> 1070
 <211> 94
 <212> PRT
 <213> Homo sapiens

<400> 1070
 Met Ala Cys Val Ile Ser Gly Trp Ala Leu Ser Arg Gly Ala Arg Thr
 1 5 10 15
 Trp Thr Trp Ala Thr Pro Thr Gly Pro Val His Arg Ala Gln Pro Ala
 20 25 30
 Ile Arg Ser Leu Ser Ala Glu Gly Ala Leu Thr Arg Leu Lys Glu Glu
 35 40 45
 Lys Trp Pro Gly Arg Tyr Ile Leu Pro Asn His Leu Thr Pro Pro Phe
 50 55 60
 Leu Tyr Lys His Leu Gly Ser Val Pro Pro Ser His Trp Arg Ser Pro
 65 70 75 80
 Leu Ile Ser His Ser Val Asn Ile Leu Ala Leu Asn Trp Arg
 85 90 94

<210> 1071
 <211> 364
 <212> PRT
 <213> Homo sapiens

<400> 1071
 Met Leu Arg Phe Leu Pro Asp Leu Ala Phe Ser Phe Leu Leu Ile Leu
 1 5 10 15
 Ala Leu Gly Gln Ala Val Gln Phe Gln Glu Tyr Val Phe Leu Gln Phe
 20 25 30
 Leu Gly Leu Asp Lys Ala Pro Ser Pro Gln Lys Phe Gln Pro Val Pro
 35 40 45
 Tyr Ile Leu Lys Lys Ile Phe Gln Asp Arg Glu Ala Ala Ala Thr Thr
 50 55 60
 Gly Val Ser Arg Asp Leu Cys Tyr Val Lys Glu Leu Gly Val Arg Gly
 65 70 75 80
 Asn Val Leu Arg Phe Leu Pro Asp Gln Gly Phe Phe Leu Tyr Pro Lys
 85 90 95
 Lys Ile Ser Gln Ala Ser Ser Cys Leu Gln Lys Leu Leu Tyr Phe Asn
 100 105 110
 Leu Ser Ala Ile Lys Glu Arg Glu Gln Leu Thr Leu Ala Gln Leu Gly
 115 120 125
 Leu Asp Leu Gly Pro Asn Ser Tyr Tyr Asn Leu Gly Pro Glu Leu Glu
 130 135 140
 Leu Ala Leu Phe Leu Val Gln Glu Pro His Val Trp Gly Gln Thr Asn
 145 150 155 160
 Pro Lys Pro Gly Lys Met Phe Val Leu Arg Ser Val Pro Trp Pro Gln
 165 170 175
 Gly Ala Val His Phe Asn Leu Leu Asp Val Ala Lys Asp Trp Asn Asp
 180 185 190
 Asn Pro Arg Lys Asn Phe Gly Leu Phe Leu Glu Ile Leu Val Lys Glu
 195 200 205
 Asp Arg Asp Ser Gly Val Asn Phe Gln Pro Glu Asp Thr Cys Ala Arg
 210 215 220

```

Leu Arg Cys Ser Leu His Ala Ser Leu Leu Val Val Thr Leu Asn Pro
225                230                235                240
Asp Gln Cys His Pro Ser Arg Lys Arg Arg Ala Ala Ile Pro Val Pro
                245                250                255
Lys Leu Ser Cys Lys Asn Leu Cys His Arg His Gln Leu Phe Ile Asn
                260                265                270
Phe Arg Asp Leu Gly Trp His Lys Trp Ile Ile Ala Pro Lys Gly Phe
                275                280                285
Met Ala Asn Tyr Cys His Gly Glu Cys Pro Phe Ser Leu Thr Ile Ser
                290                295                300
Leu Asn Ser Ser Asn Tyr Ala Phe Met Gln Ala Leu Met His Ala Val
305                310                315                320
Asp Pro Glu Ile Pro Gln Ala Val Cys Ile Pro Thr Lys Leu Ser Pro
                325                330                335
Ile Ser Met Leu Tyr Gln Asp Asn Asn Asp Asn Val Ile Leu Arg His
                340                345                350
Tyr Glu Asp Met Val Val Asp Glu Cys Gly Cys Gly
                355                360                364

```

<210> 1072
 <211> 264
 <212> PRT
 <213> Homo sapiens

<400> 1072

```

Met Arg Pro Leu Leu Gly Leu Leu Leu Val Phe Ala Gly Cys Thr Phe
1          5          10          15
Ala Leu Tyr Leu Leu Ser Thr Arg Leu Pro Arg Gly Arg Arg Leu Gly
          20          25          30
Ser Thr Glu Ala Gly Gly Arg Ser Leu Trp Phe Pro Ser Asp Leu
          35          40          45
Ala Glu Leu Arg Glu Leu Ser Glu Val Leu Arg Glu Tyr Arg Lys Glu
          50          55          60
His Gln Ala Tyr Val Phe Leu Leu Phe Cys Gly Ala Tyr Leu Tyr Lys
          65          70          75          80
Gln Gly Phe Ala Ile Pro Gly Ser Ser Phe Leu Asn Val Leu Ala Gly
          85          90          95
Ala Leu Phe Gly Pro Trp Leu Gly Leu Leu Leu Cys Cys Val Leu Thr
          100          105          110
Ser Val Gly Ala Thr Cys Cys Tyr Leu Leu Ser Ser Ile Phe Gly Lys
          115          120          125
Gln Leu Val Val Ser Tyr Phe Pro Asp Lys Val Ala Leu Leu Gln Arg
          130          135          140
Lys Val Glu Glu Asn Arg Asn Ser Leu Phe Phe Phe Leu Leu Phe Leu
          145          150          155          160
Arg Leu Phe Pro Met Thr Pro Asn Trp Phe Leu Asn Leu Ser Ala Pro
          165          170          175
Ile Leu Asn Ile Pro Ile Val Gln Phe Phe Phe Ser Val Leu Ile Gly
          180          185          190
Leu Ile Pro Tyr Asn Phe Ile Cys Val Gln Thr Gly Ser Ile Leu Ser
          195          200          205
Thr Leu Thr Ser Leu Asp Ala Leu Phe Ser Trp Asp Thr Val Phe Lys
          210          215          220
Leu Leu Ala Ile Ala Met Val Ala Leu Ile Pro Gly Thr Leu Ile Lys
          225          230          235          240
Lys Phe Ser Gln Lys His Leu Gln Leu Asn Glu Thr Ser Thr Ala Asn
          245          250          255
His Ile His Ser Arg Lys Asp Thr
          260          264

```

<210> 1073
 <211> 226
 <212> PRT
 <213> Homo sapiens

<400> 1073
 Met Ser Arg Pro Arg Lys Arg Leu Ala Gly Thr Ser Gly Ser Asp Lys
 1 5 10 15
 Gly Leu Ser Gly Lys Arg Thr Lys Thr Glu Asn Ser Gly Glu Ala Leu
 20 25 30
 Ala Lys Val Glu Asp Ser Asn Pro Gln Lys Thr Ser Ala Thr Lys Asn
 35 40 45
 Cys Leu Lys Asn Leu Ser Ser His Trp Leu Met Lys Ser Glu Pro Glu
 50 55 60
 Ser Arg Leu Glu Lys Gly Val Asp Val Lys Phe Ser Ile Glu Asp Leu
 65 70 75 80
 Lys Ala Gln Pro Lys Gln Thr Thr Cys Trp Asp Gly Val Arg Asn Tyr
 85 90 95
 Gln Ala Arg Asn Phe Leu Arg Ala Met Lys Leu Gly Glu Glu Ala Phe
 100 105 110
 Phe Tyr His Ser Asn Cys Lys Glu Pro Gly Ile Ala Gly Leu Met Lys
 115 120 125
 Ile Val Lys Glu Ala Tyr Pro Asp His Thr Gln Phe Glu Lys Asn Asn
 130 135 140
 Pro His Tyr Asp Pro Ser Lys Glu Asp Asn Pro Lys Trp Ser Met
 145 150 155 160
 Val Asp Val Gln Phe Val Arg Met Met Lys Arg Phe Ile Pro Leu Ala
 165 170 175
 Glu Leu Lys Ser Tyr His Gln Ala His Lys Ala Thr Gly Gly Pro Leu
 180 185 190
 Lys Asn Met Val Leu Phe Thr Arg Gln Arg Leu Ser Ile Gln Pro Leu
 195 200 205
 Thr Gln Glu Glu Phe Asp Phe Val Leu Ser Leu Glu Glu Lys Glu Pro
 210 215 220
 Ser *
 225

<210> 1074
 <211> 185
 <212> PRT
 <213> Homo sapiens

<400> 1074
 Met Ser Arg Pro Arg Lys Arg Leu Ala Gly Thr Ser Gly Ser Asp Lys
 1 5 10 15
 Gly Leu Ser Gly Lys Arg Thr Lys Thr Glu Asn Ser Gly Glu Ala Leu
 20 25 30
 Ala Lys Val Glu Asp Ser Asn Pro Gln Lys Thr Ser Ala Thr Lys Asn
 35 40 45
 Cys Leu Lys Asn Leu Ser Ser His Trp Leu Met Lys Ser Glu Pro Glu
 50 55 60
 Ser Arg Leu Glu Lys Gly Val Asp Val Lys Phe Ser Ile Glu Asp Leu
 65 70 75 80
 Lys Ala Gln Pro Lys Gln Thr Thr Cys Trp Asp Gly Val Arg Asn Tyr
 85 90 95
 Gln Ala Arg Asn Phe Leu Arg Ala Met Lys Leu Gly Glu Glu Ala Phe
 100 105 110
 Phe Tyr His Ser Asn Cys Lys Glu Pro Gly Ile Ala Gly Leu Met Lys
 115 120 125

```

Ile Val Lys Glu Ala Tyr Pro Asp His Thr Gln Phe Glu Lys Asn Asn
  130                      135                      140
Pro His Tyr Asp Pro Ser Ser Lys Glu Asp Asn Pro Lys Trp Ser Met
  145                      150                      155                      160
Arg Leu Ser Ile Gln Pro Leu Thr Gln Glu Glu Phe Asp Phe Val Leu
                      165                      170                      175
Ser Leu Glu Glu Lys Glu Pro Ser *
                      180                      184

```

```

<210> 1075
<211> 311
<212> PRT
<213> Homo sapiens

```

```

<400> 1075
Met Gly Ser Phe Gln Leu Glu Asp Phe Ala Ala Gly Trp Ile Gly Gly
  1                      5                      10                      15
Ala Ala Ser Val Ile Val Gly His Pro Leu Asp Thr Val Lys Thr Arg
                      20                      25                      30
Leu Gln Ala Gly Val Gly Tyr Gly Asn Thr Leu Ser Cys Ile Arg Val
                      35                      40                      45
Val Tyr Arg Arg Glu Ser Met Phe Gly Phe Phe Lys Gly Met Ser Phe
                      50                      55                      60
Pro Leu Ala Ser Ile Ala Val Tyr Asn Ser Val Val Phe Gly Val Phe
  65                      70                      75                      80
Ser Asn Thr Gln Arg Phe Leu Ser Gln His Arg Cys Gly Glu Pro Glu
                      85                      90                      95
Ala Ser Pro Pro Arg Thr Leu Ser Asp Leu Leu Leu Ala Ser Met Val
                      100                      105                      110
Ala Gly Val Val Ser Val Gly Leu Gly Gly Pro Val Asp Leu Ile Lys
                      115                      120                      125
Ile Arg Leu Gln Met Gln Thr Gln Pro Phe Arg Asp Ala Asn Leu Gly
  130                      135                      140
Leu Lys Ser Arg Ala Val Ala Pro Ala Glu Gln Pro Ala Tyr Gln Gly
  145                      150                      155                      160
Pro Val His Cys Ile Thr Thr Ile Val Arg Asn Glu Gly Leu Ala Gly
                      165                      170                      175
Leu Tyr Arg Gly Ala Ser Ala Met Leu Leu Arg Asp Val Pro Gly Tyr
                      180                      185                      190
Cys Leu Tyr Phe Ile Pro Tyr Val Phe Leu Ser Glu Trp Ile Thr Pro
                      195                      200                      205
Glu Ala Cys Thr Gly Pro Ser Pro Cys Ala Val Trp Leu Ala Gly Gly
  210                      215                      220
Met Ala Gly Ala Ile Ser Trp Gly Thr Ala Thr Pro Met Asp Val Val
  225                      230                      235                      240
Lys Ser Arg Leu Gln Ala Asp Gly Val Tyr Leu Asn Lys Tyr Lys Gly
                      245                      250                      255
Val Leu Asp Cys Ile Ser Gln Ser Tyr Gln Lys Glu Gly Leu Lys Val
                      260                      265                      270
Phe Phe Arg Gly Ile Thr Val Asn Ala Val Arg Gly Phe Pro Met Ser
                      275                      280                      285
Ala Ala Met Phe Leu Gly Tyr Glu Leu Ser Leu Gln Ala Ile Arg Gly
  290                      295                      300
Asp His Ala Val Thr Ser Pro
  305                      310 311

```

```

<210> 1076
<211> 419
<212> PRT

```

<213> Homo sapiens

<400> 1076

```

Met Pro Ala Arg Ala Gly Ala Trp Ala Glu Thr Pro Glu Pro Leu Tyr
 1          5          10          15
Gln Ser Pro Arg Lys Asn Ser Gln Gln Cys Leu Val Arg Pro Cys Phe
          20          25          30
His Gly Val Leu Leu Leu Gly Lys Gly Thr Gly Gly Asn Tyr Thr Phe
          35          40          45
Arg Leu Trp Gln Gly Pro Trp Arg Cys Arg Arg Pro Gln Pro Met Ala
          50          55          60
Gln Arg Tyr Asp Glu Leu Pro His Tyr Pro Gly Ile Ala Asp Gly Pro
          65          70          75          80
Ala Ala Leu Ala Gly Phe Pro Glu Ala Val Pro Ala Ala Pro Gly Pro
          85          90          95
Tyr Gly Pro His Arg Pro Pro Gln Pro Leu Pro Pro Gly Leu Asp Ser
          100          105          110
Asp Gly Leu Lys Arg Asp Lys Asp Glu Ile Tyr Gly His Pro Leu Phe
          115          120          125
Pro Leu Leu Ala Leu Val Phe Glu Lys Cys Glu Leu Ala Thr Cys Ser
          130          135          140
Pro Arg Asp Gly Ala Gly Ala Gly Leu Gly Thr Pro Arg Gly Gly Asp
          145          150          155          160
Val Cys Ser Ser Asp Ser Phe Asn Glu Asp Asn Thr Ala Phe Ala Lys
          165          170          175
Gln Val Cys Ser Glu Arg Pro Phe Ser Ser Asn Pro Glu Leu Asp Asn
          180          185          190
Leu Met Ile Gln Ala Ile Gln Val Leu Arg Phe His Leu Leu Glu Leu
          195          200          205
Glu Lys Gly Lys Met Pro Ile Asp Leu Val Ile Glu Asp Arg Asp Gly
          210          215          220
Gly Cys Arg Glu Asp Phe Glu Asp Tyr Pro Ala Ser Cys Pro Ser Leu
          225          230          235          240
Pro Asp Gln Asn Asn Ile Trp Ile Arg Asp His Glu Asp Ser Gly Ser
          245          250          255
Val His Leu Gly Thr Pro Gly Pro Ser Ser Gly Gly Leu Ala Ser Gln
          260          265          270
Ser Gly Asp Asn Ser Ser Asp Gln Gly Val Gly Leu Asp Thr Ser Val
          275          280          285
Ala Ser Pro Ser Ser Gly Gly Glu Asp Glu Asp Leu Asp Gln Glu Pro
          290          295          300
Arg Arg Asn Lys Lys Arg Gly Ile Phe Pro Lys Val Ala Thr Asn Ile
          305          310          315          320
Met Arg Ala Trp Leu Phe Gln His Leu Ser His Pro Tyr Pro Ser Glu
          325          330          335
Glu Gln Lys Lys Gln Leu Ala Gln Asp Thr Gly Leu Thr Ile Leu Gln
          340          345          350
Val Asn Asn Trp Phe Ile Asn Ala Arg Arg Arg Ile Val Gln Pro Met
          355          360          365
Ile Asp Gln Ser Asn Arg Thr Gly Gln Gly Ala Ala Phe Ser Pro Glu
          370          375          380
Gly Gln Pro Ile Gly Gly Tyr Thr Glu Thr Glu Pro His Val Ala Phe
          385          390          395          400
Arg Ala Pro Ala Ser Val Gly Met Ser Leu Asn Ser Glu Gly Glu Trp
          405          410          415
His Tyr Leu
          419

```

<210> 1077

<211> 260

<212> PRT

<213> Homo sapiens

<400> 1077

```

Met Val Ser His Pro His Pro Pro Pro Ser Pro Arg Trp Gly Gln Thr
 1          5          10          15
Pro Glu Gly Leu Pro Ala Ala Ser Pro Cys Gly Pro Gly Pro Arg Ser
 20          25          30
Cys Phe Ser Ser Ile Leu Pro Thr Gly Asp Ser Trp Gly Met Leu Ala
 35          40          45
Cys Leu Cys Thr Val Leu Trp His Leu Pro Ala Val Pro Ala Leu Asn
 50          55          60
Arg Thr Gly Asp Pro Gly Pro Gly Pro Ser Ile Gln Lys Thr Tyr Asp
 65          70          75          80
Pro Thr Arg Tyr Leu Glu His Gln Leu Arg Ser Leu Ala Gly Thr Tyr
 85          90          95
Leu Asn Tyr Leu Gly Pro Pro Phe Asn Glu Pro Asp Phe Asn Pro Pro
100          105          110
Arg Leu Gly Ala Glu Thr Leu Pro Arg Ala Thr Val Asp Leu Glu Val
115          120          125
Trp Arg Ser Leu Asn Asp Lys Leu Arg Leu Thr Gln Asn Tyr Glu Ala
130          135          140
Tyr Ser His Leu Leu Cys Tyr Leu Arg Gly Leu Asn Arg Gln Ala Ala
145          150          155          160
Thr Ala Glu Leu Arg Arg Ser Leu Ala His Phe Cys Thr Ser Leu Gln
165          170          175
Gly Leu Leu Gly Ser Ile Ala Gly Val Met Ala Ala Leu Gly Tyr Pro
180          185          190
Leu Pro Gln Pro Leu Pro Gly Thr Glu Pro Thr Trp Thr Pro Gly Pro
195          200          205
Ala His Ser Asp Phe Leu Gln Lys Met Asp Asp Phe Trp Leu Leu Lys
210          215          220
Glu Leu Gln Thr Trp Leu Trp Arg Ser Ala Lys Asp Phe Asn Arg Leu
225          230          235          240
Lys Lys Lys Met Gln Pro Pro Ala Ala Val Thr Leu His Leu Gly
245          250          255
Ala His Gly Phe
260

```

<210> 1078

<211> 132

<212> PRT

<213> Homo sapiens

<400> 1078

```

Met Tyr Ala Tyr Met Tyr Ile Cys Thr His Ile Cys Ile Cys Ala Tyr
 1          5          10          15
Arg Gly Ile His Ile Asp Val Tyr Leu Tyr Met Cys Ile Tyr Ile His
 20          25          30
Ile Trp Ile His Thr Tyr Leu Cys Val His Ile Tyr Val Tyr Val Tyr
 35          40          45
Ile Cys Thr His Ile Cys Met Cys Ile His Thr Tyr Val Tyr Val Tyr
 50          55          60
Thr Tyr Met Tyr Val Tyr Thr Tyr Ile Cys Leu Cys Val Tyr Ile Cys
 65          70          75          80
Leu Cys Val His Ile Tyr Leu Cys Val Tyr Ile His Met Tyr Met Cys
 85          90          95
Thr His Ile Cys Met Cys Ile His Thr Tyr Val His Met Cys Ile Cys
100          105          110
Val Tyr Ile His Met Tyr Thr Cys Val Tyr Val Tyr Thr Tyr Thr Cys
115          120          125

```

Val Tyr Met Tyr
130 132

<210> 1079
<211> 248
<212> PRT
<213> Homo sapiens

<400> 1079
Met Arg Gly Glu Glu Val Ala Pro Val Thr Leu Cys Ser Leu Tyr
1 5 10 15
Thr Tyr Asp Gln Gly Asp Ser Leu Asp Leu Leu Gly Pro Ile Gly Ile
20 25 30
Leu Gln Glu Gly Arg Asp Pro Gly Thr Gln Gly Pro Gln Glu Lys Glu
35 40 45
Lys Gln Met Pro Ala Ser Pro Met Asn Thr Asp Ala His Leu Asp Ile
50 55 60
Asn Phe Lys Glu Gly Leu Lys Lys Glu Arg Ser Tyr Thr Gly Gln Phe
65 70 75 80
Glu Ala Asn Val Arg Asp Glu Glu Arg Gln Cys Gly Cys Gly Val Val
85 90 95
Pro Asp Ser Leu Leu Met Lys Val Leu Ser Gln Arg Leu Asp Gln Gln
100 105 110
Asp Cys Ile Gln Lys Gly Trp Val Leu His Gly Val Pro Arg Asp Leu
115 120 125
Asp Gln Ala His Leu Leu Asn Arg Leu Gly Tyr Asn Pro Asn Arg Val
130 135 140
Phe Phe Leu Asn Val Pro Phe Asp Ser Ile Met Glu Arg Leu Thr Leu
145 150 155 160
Arg Arg Ile Asp Pro Val Thr Gly Glu Arg Tyr His Leu Met Tyr Lys
165 170 175
Pro Pro Pro Thr Met Glu Ile Gln Ala Arg Leu Leu Gln Asn Pro Lys
180 185 190
Asp Ala Glu Glu Gln Val Lys Leu Lys Met Asp Leu Phe Tyr Arg Asn
195 200 205
Ser Ala Asp Leu Glu Gln Leu Tyr Gly Ser Ala Ile Thr Leu Asn Gly
210 215 220
Asp Gln Asp Pro Tyr Thr Val Phe Glu Tyr Ile Glu Ser Gly Ile Ile
225 230 235 240
Asn Pro Leu Pro Lys Lys Ile Pro
245 248

<210> 1080
<211> 387
<212> PRT
<213> Homo sapiens

<400> 1080
Met Thr Ser His Ala Arg Val Arg Lys Leu Gly Ser Ser Arg Ala Ala
1 5 10 15
Ala Ala Gly Pro Gly Ala Gly Gln Glu Val Gln Thr Glu Asn Val Thr
20 25 30
Val Ala Glu Gly Gly Val Ala Glu Ile Thr Cys Arg Leu His Gln Tyr
35 40 45
Asp Gly Ser Ile Val Val Ile Gln Asn Pro Ala Arg Gln Thr Leu Phe
50 55 60
Phe Asn Gly Thr Arg Ala Leu Lys Asp Glu Arg Phe Gln Leu Glu Glu
65 70 75 80

Phe Ser Pro Arg Arg Val Arg Ile Arg Leu Ser Asp Ala Arg Leu Glu
 85 90 95
 Asp Glu Gly Gly Tyr Phe Cys Gln Leu Tyr Thr Glu Asp Thr His His
 100 105 110
 Gln Ile Ala Thr Leu Thr Val Leu Val Ala Pro Glu Asn Pro Val Val
 115 120 125
 Glu Val Arg Glu Gln Ala Val Glu Gly Gly Glu Val Glu Leu Ser Cys
 130 135 140
 Leu Val Pro Arg Ser Arg Pro Ala Ala Thr Leu Arg Trp Tyr Arg Asp
 145 150 155 160
 Arg Lys Glu Leu Lys Gly Val Ser Ser Ser Gln Glu Asn Gly Lys Val
 165 170 175
 Trp Ser Val Ala Ser Thr Val Arg Phe Arg Val Asp Arg Lys Asp Asp
 180 185 190
 Gly Gly Ile Ile Ile Cys Glu Ala Gln Asn Gln Ala Leu Pro Ser Gly
 195 200 205
 His Ser Lys Gln Thr Gln Tyr Val Leu Asp Val Gln Tyr Ser Pro Thr
 210 215 220
 Ala Arg Ile His Ala Ser Gln Ala Val Val Arg Glu Gly Asp Thr Leu
 225 230 235 240
 Val Leu Thr Cys Ala Val Thr Gly Asn Pro Arg Pro Asn Gln Ile Arg
 245 250 255
 Trp Asn Arg Gly Asn Glu Ser Leu Pro Glu Arg Ala Glu Ala Val Gly
 260 265 270
 Glu Thr Leu Thr Leu Pro Gly Leu Val Ser Ala Asp Asn Gly Thr Tyr
 275 280 285
 Thr Cys Glu Ala Ser Asn Lys His Gly His Ala Arg Ala Leu Tyr Val
 290 295 300
 Leu Val Val Tyr Asp Pro Gly Ala Val Val Glu Ala Gln Thr Ser Val
 305 310 315 320
 Pro Tyr Ala Ile Val Gly Gly Ile Leu Ala Leu Leu Val Phe Leu Ile
 325 330 335
 Ile Cys Val Leu Val Gly Met Val Trp Cys Ser Val Arg Gln Lys Gly
 340 345 350
 Ser Tyr Leu Thr His Glu Ala Ser Gly Leu Asp Glu Gln Gly Glu Ala
 355 360 365
 Arg Glu Ala Phe Leu Asn Gly Ser Asp Gly His Lys Arg Lys Glu Glu
 370 375 380
 Phe Phe Ile
 385 387

<210> 1081
 <211> 750
 <212> PRT
 <213> Homo sapiens

<400> 1081
 Met Ala Ala Ala Gly Ser Arg Lys Arg Arg Leu Ala Glu Leu Thr Val
 1 5 10 15
 Asp Glu Phe Leu Ala Ser Gly Phe Asp Ser Glu Ser Glu Ser Glu Ser
 20 25 30
 Glu Asn Ser Pro Gln Ala Glu Thr Arg Glu Ala Arg Glu Ala Ala Arg
 35 40 45
 Ser Pro Asp Lys Pro Gly Gly Ser Pro Ser Ala Ser Arg Arg Lys Gly
 50 55 60
 Arg Ala Ser Glu His Lys Asp Gln Leu Ser Arg Leu Lys Asp Arg Asp
 65 70 75 80
 Pro Glu Phe Tyr Lys Phe Leu Gln Glu Asn Asp Gln Ser Leu Leu Asn
 85 90 95
 Phe Ser Asp Ser Asp Ser Ser Glu Glu Glu Gly Pro Phe His Ser
 100 105 110

Leu Pro Asp Val Leu Glu Glu Ala Ser Glu Glu Glu Asp Gly Ala Glu
 115 120 125
 Glu Gly Glu Asp Gly Asp Arg Val Pro Arg Gly Leu Lys Gly Lys Lys
 130 135 140
 Asn Ser Val Pro Val Thr Val Ala Met Val Glu Arg Trp Lys Gln Ala
 145 150 155 160
 Ala Lys Gln Arg Leu Thr Pro Lys Leu Phe His Glu Val Val Gln Ala
 165 170 175
 Phe Arg Ala Ala Val Ala Thr Thr Arg Gly Asp Gln Glu Ser Ala Glu
 180 185 190
 Ala Asn Lys Phe Gln Val Thr Asp Ser Ala Ala Phe Asn Ala Leu Val
 195 200 205
 Thr Phe Cys Ile Arg Asp Leu Ile Gly Cys Leu Gln Lys Leu Leu Phe
 210 215 220
 Gly Lys Val Ala Lys Asp Ser Ser Arg Met Leu Gln Pro Ser Ser Ser
 225 230 235 240
 Pro Leu Trp Gly Lys Leu Arg Val Asp Ile Lys Ala Tyr Leu Gly Ser
 245 250 255
 Ala Ile Gln Leu Val Ser Cys Leu Ser Glu Thr Thr Val Leu Ala Ala
 260 265 270
 Val Leu Arg His Ile Ser Val Leu Val Pro Cys Phe Leu Thr Phe Pro
 275 280 285
 Lys Gln Cys Arg Met Leu Leu Lys Arg Met Val Val Val Trp Ser Thr
 290 295 300
 Gly Glu Glu Ser Leu Arg Val Leu Ala Phe Leu Val Leu Ser Arg Val
 305 310 315 320
 Cys Arg His Lys Lys Asp Thr Phe Leu Gly Pro Val Leu Lys Gln Met
 325 330 335
 Tyr Ile Thr Tyr Val Arg Asn Cys Lys Phe Thr Ser Pro Gly Ala Leu
 340 345 350
 Pro Phe Ile Ser Phe Met Gln Trp Thr Leu Thr Glu Leu Leu Ala Leu
 355 360 365
 Glu Pro Gly Val Ala Tyr Gln His Ala Phe Leu Tyr Ile Arg Gln Leu
 370 375 380
 Ala Ile His Leu Arg Asn Ala Met Thr Thr Arg Lys Lys Glu Thr Tyr
 385 390 395 400
 Gln Ser Val Tyr Asn Trp Gln Tyr Val His Cys Leu Phe Leu Trp Cys
 405 410 415
 Arg Val Leu Ser Thr Ala Gly Pro Ser Glu Ala Leu Gln Pro Leu Val
 420 425 430
 Tyr Pro Leu Ala Gln Val Ile Ile Gly Cys Ile Lys Leu Ile Pro Thr
 435 440 445
 Ala Arg Phe Tyr Pro Leu Arg Met His Cys Ile Arg Ala Leu Thr Leu
 450 455 460
 Leu Ser Gly Ser Ser Gly Ala Phe Ile Pro Val Leu Pro Phe Ile Leu
 465 470 475 480
 Glu Met Phe Gln Gln Val Asp Phe Asn Arg Lys Pro Gly Arg Met Ser
 485 490 495
 Ser Lys Pro Ile Asn Phe Ser Val Ile Leu Lys Leu Ser Asn Val Asn
 500 505 510
 Leu Gln Glu Lys Ala Tyr Arg Asp Gly Leu Val Glu Gln Leu Tyr Asp
 515 520 525
 Leu Thr Leu Glu Tyr Leu His Ser Gln Ala His Cys Ile Gly Phe Pro
 530 535 540
 Glu Leu Val Leu Pro Val Val Leu Gln Leu Lys Ser Phe Leu Arg Glu
 545 550 555 560
 Cys Lys Val Ala Asn Tyr Cys Arg Gln Val Gln Gln Leu Leu Gly Lys
 565 570 575
 Val Gln Glu Asn Ser Ala Tyr Ile Cys Ser Arg Arg Gln Arg Val Ser
 580 585 590
 Phe Gly Val Ser Glu Gln Gln Ala Val Glu Ala Trp Glu Lys Leu Thr
 595 600 605
 Arg Glu Glu Gly Thr Pro Leu Thr Leu Tyr Tyr Ser His Trp Arg Lys
 610 615 620

Leu Arg Asp Arg Glu Ile Gln Leu Glu Ile Ser Gly Lys Glu Arg Leu
 625 630 635 640
 Glu Asp Leu Asn Phe Pro Glu Ile Lys Arg Arg Lys Met Ala Asp Arg
 645 650 655
 Lys Asp Glu Asp Arg Lys Gln Phe Lys Asp Leu Phe Asp Leu Asn Ser
 660 665 670
 Ser Glu Glu Asp Asp Thr Glu Gly Phe Ser Glu Arg Gly Ile Leu Arg
 675 680 685
 Pro Leu Ser Thr Arg His Gly Val Glu Asp Asp Glu Glu Asp Glu Glu
 690 695 700
 Glu Gly Glu Glu Asp Ser Ser Asn Ser Glu Asp Gly Asp Pro Asp Ala
 705 710 715 720
 Glu Ala Gly Leu Ala Pro Gly Glu Leu Gln Leu Ala Gln Gly Pro
 725 730 735
 Glu Asp Glu Leu Glu Asp Leu Gln Leu Ser Glu Asp Asp *
 740 745 749

<210> 1082
 <211> 154
 <212> PRT
 <213> Homo sapiens

<400> 1082
 His Leu Asp Arg Tyr Ile Lys Ser Pro Gly Ser Gly Ser Ser Thr Pro
 1 5 10 15
 Ala Pro Pro Ser His Leu Leu Leu Tyr Leu Ile His Pro Gln Ser Thr
 20 25 30
 Arg Thr Met Gly Cys Cys Gly Cys Ser Gly Gly Cys Gly Ser Gly Cys
 35 40 45
 Gly Gly Cys Gly Ser Ser Cys Gly Gly Cys Gly Ser Gly Cys Gly Gly
 50 55 60
 Cys Gly Ser Gly Arg Gly Gly Cys Gly Ser Gly Cys Gly Gly Cys Ser
 65 70 75 80
 Ser Ser Cys Gly Gly Cys Gly Ser Arg Cys Tyr Val Pro Val Cys Cys
 85 90 95
 Cys Lys Pro Val Cys Ser Trp Val Pro Ala Cys Ser Cys Thr Ser Cys
 100 105 110
 Gly Ser Cys Gly Gly Ser Lys Gly Gly Cys Gly Ser Cys Gly Gly Ser
 115 120 125
 Lys Gly Gly Cys Gly Ser Cys Gly Cys Ser Gln Ser Ser Cys Cys Lys
 130 135 140
 Pro Cys Cys Cys Ser Ser Gly Cys Gly Ser
 145 150 154

<210> 1083
 <211> 1340
 <212> PRT
 <213> Homo sapiens

<400> 1083
 Ala Gly Ile Phe Glu Leu Val Glu Leu Val Gly Asn Gly Thr Tyr Gly
 1 5 10 15
 Gln Val Tyr Lys Gly Arg His Val Lys Thr Gly Gln Leu Ala Ala Ile
 20 25 30
 Lys Val Met Asp Val Thr Gly Asp Glu Glu Glu Glu Ile Lys Gln Glu
 35 40 45
 Ile Asn Met Leu Lys Lys Tyr Ser His His Arg Asn Ile Ala Thr Tyr
 50 55 60

Tyr	Gly	Ala	Phe	Ile	Lys	Lys	Asn	Pro	Pro	Gly	Met	Asp	Asp	Gln	Leu	65	70	75	80
Trp	Leu	Val	Met	Glu	Phe	Cys	Gly	Ala	Gly	Ser	Val	Thr	Asp	Leu	Ile	85	90		95
Lys	Asn	Thr	Lys	Gly	Tyr	Thr	Leu	Lys	Glu	Glu	Trp	Ile	Ala	Tyr	Ile	100	105		110
Cys	Arg	Glu	Ile	Leu	Arg	Gly	Leu	Ser	His	Leu	His	Gln	His	Lys	Val	115	120		125
Ile	His	Arg	Asp	Ile	Lys	Gly	Gln	Asn	Val	Leu	Leu	Thr	Glu	Asn	Ala	130	135		140
Glu	Val	Lys	Leu	Val	Asp	Phe	Gly	Val	Ser	Ala	Gln	Leu	Asp	Arg	Thr	145	150		155
Val	Gly	Arg	Arg	Asn	Thr	Phe	Ile	Gly	Thr	Pro	Tyr	Trp	Met	Ala	Pro	165	170		175
Glu	Val	Ile	Ala	Cys	Asp	Glu	Asn	Pro	Asp	Ala	Thr	Tyr	Asp	Phe	Lys	180	185		190
Ser	Asp	Leu	Trp	Ser	Leu	Gly	Ile	Thr	Ala	Ile	Glu	Met	Ala	Glu	Gly	195	200		205
Ala	Pro	Pro	Leu	Cys	Asp	Met	His	Pro	Met	Arg	Ala	Leu	Phe	Leu	Ile	210	215		220
Pro	Arg	Asn	Pro	Ala	Pro	Arg	Leu	Lys	Ser	Lys	Lys	Trp	Ser	Lys	Lys	225	230		235
Phe	Gln	Ser	Phe	Ile	Glu	Ser	Cys	Leu	Val	Lys	Asn	His	Ser	Gln	Arg	245	250		255
Pro	Ala	Thr	Glu	Gln	Leu	Met	Lys	His	Pro	Phe	Ile	Arg	Asp	Gln	Pro	260	265		270
Asn	Glu	Arg	Gln	Val	Arg	Ile	Gln	Leu	Lys	Asp	His	Ile	Asp	Arg	Thr	275	280		285
Lys	Lys	Lys	Arg	Gly	Glu	Lys	Asp	Glu	Thr	Glu	Tyr	Glu	Tyr	Ser	Gly	290	295		300
Ser	Glu	Glu	Glu	Glu	Glu	Glu	Asn	Asp	Ser	Gly	Glu	Pro	Ser	Ser	Ile	305	310		315
Leu	Asn	Leu	Pro	Gly	Glu	Ser	Thr	Leu	Arg	Arg	Asp	Phe	Leu	Arg	Leu	325	330		335
Gln	Leu	Ala	Asn	Lys	Glu	Arg	Ser	Glu	Ala	Leu	Arg	Arg	Gln	Gln	Leu	340	345		350
Glu	Gln	Gln	Gln	Arg	Glu	Asn	Glu	Glu	His	Lys	Arg	Gln	Leu	Leu	Ala	355	360		365
Glu	Arg	Gln	Lys	Arg	Ile	Glu	Glu	Gln	Lys	Glu	Gln	Arg	Arg	Arg	Leu	370	375		380
Glu	Glu	Gln	Gln	Arg	Arg	Glu	Lys	Glu	Leu	Arg	Lys	Gln	Gln	Glu	Arg	385	390		395
Glu	Gln	Arg	Arg	His	Tyr	Glu	Glu	Gln	Met	Arg	Arg	Glu	Glu	Glu	Arg	405	410		415
Arg	Arg	Ala	Glu	His	Glu	Gln	Glu	Tyr	Ile	Arg	Arg	Gln	Leu	Glu	Glu	420	425		430
Glu	Gln	Arg	Gln	Leu	Glu	Ile	Leu	Gln	Gln	Gln	Leu	Leu	His	Glu	Gln	435	440		445
Ala	Leu	Leu	Leu	Glu	Tyr	Lys	Arg	Lys	Gln	Leu	Glu	Glu	Gln	Arg	Gln	450	455		460
Ala	Glu	Arg	Leu	Gln	Arg	Gln	Leu	Lys	Gln	Glu	Arg	Asp	Tyr	Leu	Val	465	470		475
Ser	Leu	Gln	His	Gln	Arg	Gln	Glu	Gln	Arg	Pro	Val	Glu	Lys	Lys	Pro	485	490		495
Leu	Tyr	His	Tyr	Lys	Glu	Gly	Met	Ser	Pro	Ser	Glu	Lys	Pro	Ala	Trp	500	505		510
Ala	Lys	Glu	Val	Glu	Glu	Arg	Ser	Arg	Leu	Asn	Arg	Gln	Ser	Ser	Pro	515	520		525
Ala	Met	Pro	His	Lys	Val	Ala	Asn	Arg	Ile	Ser	Asp	Pro	Asn	Leu	Pro	530	535		540
Pro	Arg	Ser	Glu	Ser	Phe	Ser	Ile	Ser	Gly	Val	Gln	Pro	Ala	Arg	Thr	545	550		555
Pro	Pro	Met	Leu	Arg	Pro	Val	Asp	Pro	Gln	Ile	Pro	His	Leu	Val	Ala	565	570		575

Val	Lys	Ser	Gln	Gly	Pro	Ala	Leu	Thr	Ala	Ser	Gln	Ser	Val	His	Glu	580	585	590
Gln	Pro	Thr	Lys	Gly	Leu	Ser	Gly	Phe	Gln	Glu	Ala	Leu	Asn	Val	Thr	595	600	605
Ser	His	Arg	Val	Glu	Met	Pro	Arg	Gln	Asn	Ser	Asp	Pro	Thr	Ser	Glu	610	615	620
Asn	Pro	Pro	Leu	Pro	Thr	Arg	Ile	Glu	Lys	Phe	Asp	Arg	Ser	Ser	Trp	625	630	635
Leu	Arg	Gln	Lys	Glu	Asp	Ile	Pro	Pro	Lys	Val	Pro	Gln	Arg	Thr	Thr	645	650	655
Ser	Ile	Ser	Pro	Ala	Leu	Ala	Arg	Lys	Asn	Ser	Pro	Gly	Asn	Gly	Ser	660	665	670
Ala	Leu	Gly	Pro	Arg	Leu	Gly	Ser	Gln	Pro	Ile	Arg	Ala	Ser	Asn	Pro	675	680	685
Asp	Leu	Arg	Arg	Thr	Glu	Pro	Ile	Leu	Glu	Ser	Pro	Leu	Gln	Arg	Thr	690	695	700
Ser	Ser	Gly	Ser	Ser	Ser	Ser	Ser	Ser	Thr	Pro	Ser	Ser	Gln	Pro	Ser	705	710	715
Ser	Gln	Gly	Gly	Ser	Gln	Pro	Gly	Ser	Gln	Ala	Gly	Ser	Ser	Glu	Arg	725	730	735
Thr	Arg	Val	Arg	Ala	Asn	Ser	Lys	Ser	Glu	Gly	Ser	Pro	Val	Leu	Pro	740	745	750
His	Glu	Pro	Ala	Lys	Val	Lys	Pro	Glu	Glu	Ser	Arg	Asp	Ile	Thr	Arg	755	760	765
Pro	Ser	Arg	Pro	Ala	Ser	Tyr	Lys	Lys	Ala	Ile	Asp	Glu	Asp	Leu	Thr	770	775	780
Ala	Leu	Ala	Lys	Glu	Leu	Arg	Glu	Leu	Arg	Ile	Glu	Glu	Thr	Asn	Arg	785	790	795
Pro	Met	Lys	Lys	Val	Thr	Asp	Tyr	Ser	Ser	Ser	Ser	Glu	Glu	Ser	Glu	805	810	815
Ser	Ser	Glu	Glu	Glu	Glu	Glu	Asp	Gly	Glu	Ser	Glu	Thr	His	Asp	Gly	820	825	830
Thr	Val	Ala	Val	Ser	Asp	Ile	Pro	Arg	Leu	Ile	Pro	Thr	Gly	Ala	Pro	835	840	845
Gly	Ser	Asn	Glu	Gln	Tyr	Asn	Val	Gly	Met	Val	Gly	Thr	His	Gly	Leu	850	855	860
Glu	Thr	Ser	His	Ala	Asp	Ser	Phe	Ser	Gly	Ser	Ile	Ser	Arg	Glu	Gly	865	870	875
Thr	Leu	Met	Ile	Arg	Glu	Thr	Ser	Gly	Glu	Lys	Lys	Arg	Ser	Gly	His	885	890	895
Ser	Asp	Ser	Asn	Gly	Phe	Ala	Gly	His	Ile	Asn	Leu	Pro	Asp	Leu	Val	900	905	910
Gln	Gln	Ser	His	Ser	Pro	Ala	Gly	Thr	Pro	Thr	Glu	Gly	Leu	Gly	Arg	915	920	925
Val	Ser	Thr	His	Ser	Gln	Glu	Met	Asp	Ser	Gly	Thr	Glu	Tyr	Gly	Met	930	935	940
Gly	Ser	Ser	Thr	Lys	Ala	Ser	Phe	Thr	Pro	Phe	Val	Asp	Pro	Arg	Val	945	950	955
Tyr	Gln	Thr	Ser	Pro	Thr	Asp	Glu	Asp	Glu	Glu	Asp	Glu	Glu	Ser	Ser	965	970	975
Ala	Ala	Ala	Leu	Phe	Thr	Ser	Glu	Leu	Leu	Arg	Gln	Glu	Gln	Ala	Lys	980	985	990
Leu	Asn	Glu	Ala	Arg	Lys	Ile	Ser	Val	Val	Asn	Val	Asn	Pro	Thr	Asn	995	1000	1005
Ile	Arg	Pro	His	Ser	Asp	Thr	Pro	Glu	Ile	Arg	Lys	Tyr	Lys	Lys	Arg	1010	1015	1020
Phe	Asn	Ser	Glu	Ile	Leu	Cys	Ala	Ala	Leu	Trp	Gly	Val	Asn	Leu	Leu	1025	1030	1035
Val	Gly	Thr	Glu	Asn	Gly	Leu	Met	Leu	Leu	Asp	Arg	Ser	Gly	Gln	Gly	1045	1050	1055
Lys	Val	Tyr	Asn	Leu	Ile	Asn	Arg	Arg	Arg	Phe	Gln	Gln	Met	Asp	Val	1060	1065	1070
Leu	Glu	Gly	Leu	Asn	Val	Leu	Val	Thr	Ile	Ser	Gly	Lys	Lys	Asn	Lys	1075	1080	1085

```

Leu Arg Val Tyr Tyr Leu Ser Trp Leu Arg Asn Arg Ile Leu His Asn
  1090                      1095                      1100
Asp Pro Glu Val Glu Lys Lys Gln Gly Trp Ile Thr Val Gly Asp Leu
1105                      1110                      1115                      1120
Glu Gly Cys Ile His Tyr Lys Val Val Lys Tyr Glu Arg Ile Lys Phe
                      1125                      1130                      1135
Leu Val Ile Ala Leu Lys Asn Ala Val Glu Ile Tyr Ala Trp Ala Pro
                      1140                      1145                      1150
Lys Pro Tyr His Lys Phe Met Ala Phe Lys Ser Phe Ala Asp Leu Gln
                      1155                      1160                      1165
His Lys Pro Leu Leu Val Asp Leu Thr Val Glu Glu Gly Gln Arg Leu
                      1170                      1175                      1180
Lys Val Ile Phe Gly Ser His Thr Gly Phe His Val Ile Asp Val Asp
1185                      1190                      1195                      1200
Ser Gly Asn Ser Tyr Asp Ile Tyr Ile Pro Ser His Ile Gln Gly Asn
                      1205                      1210                      1215
Ile Thr Pro His Ala Ile Val Ile Leu Pro Lys Thr Asp Gly Met Glu
                      1220                      1225                      1230
Met Leu Val Cys Tyr Glu Asp Glu Gly Val Tyr Val Asn Thr Tyr Gly
                      1235                      1240                      1245
Arg Ile Thr Lys Asp Val Val Leu Gln Trp Gly Glu Met Pro Thr Ser
                      1250                      1255                      1260
Val Ala Tyr Ile His Ser Asn Gln Ile Met Gly Trp Gly Glu Lys Ala
1265                      1270                      1275                      1280
Ile Glu Ile Arg Ser Val Glu Thr Gly His Leu Asp Gly Val Phe Met
                      1285                      1290                      1295
His Lys Arg Ala Gln Arg Leu Lys Phe Leu Cys Glu Arg Asn Asp Lys
                      1300                      1305                      1310
Val Phe Phe Ala Ser Val Arg Ser Gly Gly Ser Ser Gln Val Phe Phe
                      1315                      1320                      1325
Met Thr Leu Asn Arg Asn Ser Met Met Asn Trp *
                      1330                      1335                      1339

```

<210> 1084

<211> 206

<212> PRT

<213> Homo sapiens

<400> 1084

```

Met Gly Gln Val Glu Cys Gly Gly Gln Lys Leu Gly Asn Gln Leu Glu
  1          5          10          15
Asp Asp Ser Glu Pro Ala Glu Gly Lys Val Tyr Ser Ser Asp Glu Glu
          20          25          30
Lys Leu Glu Ala Ser Ala Gly Asp Pro Ala Gly Ser Glu Gln Glu Glu
          35          40          45
Glu Gly Ser Gly Gly Asp Ser Glu Asp Asp Gly Phe Leu Asp Ser Ser
          50          55          60
Ala Gly Gly Pro Gly Ala Leu Leu Gly Pro Lys Pro Lys Leu Lys Gly
          65          70          75          80
Ser Leu Gly Thr Gly Ala Glu Glu Gly Ala Pro Val Thr Ala Gly Val
          85          90          95
Thr Ala Pro Gly Gly Lys Ser Arg Arg Arg Thr Ala Phe Thr Ser
          100          105          110
Glu Gln Leu Leu Glu Leu Glu Lys Glu Phe His Cys Lys Lys Tyr Leu
          115          120          125
Ser Leu Thr Glu Arg Ser Gln Ile Ala His Ala Leu Lys Leu Ser Glu
          130          135          140
Val Gln Val Lys Ile Trp Phe Gln Asn Arg Arg Ala Lys Trp Lys Arg
          145          150          155          160
Ile Lys Ala Gly Asn Val Ser Ser Arg Ser Gly Glu Pro Val Arg Asn
          165          170          175

```


Pro Lys Ile Val Val Pro Ile Pro Val His Val Asn Arg Phe Ala Val
 180 185 190
 Arg Ser Gln His Gln Gln Met Glu Gln Gly Ala Arg Pro *
 195 200 205

<210> 1085
 <211> 472
 <212> PRT
 <213> Homo sapiens

<400> 1085
 Met Lys Gly Asn Tyr Glu Ser Leu Ile Ser Met Asp Tyr Ala Ile Asn
 1 5 10 15
 Gln Pro Asp Val Leu Ser Gln Ile Gln Pro Glu Gly Glu His Asn Thr
 20 25 30
 Glu Asp Gln Ala Gly Pro Glu Glu Ser Glu Ile Pro Thr Asp Pro Ser
 35 40 45
 Glu Glu Pro Gly Ile Ser Thr Ser Asp Ile Leu Ser Trp Ile Lys Gln
 50 55 60
 Glu Glu Glu Pro Gln Val Gly Ala Pro Pro Glu Ser Lys Glu Ser Asp
 65 70 75 80
 Val Tyr Lys Ser Thr Tyr Ala Asp Glu Glu Leu Val Ile Lys Ala Glu
 85 90 95
 Gly Leu Ala Arg Ser Ser Leu Cys Pro Glu Val Pro Val Pro Phe Ser
 100 105 110
 Ser Pro Pro Ala Ala Ala Lys Asp Ala Phe Ser Asp Val Ala Phe Lys
 115 120 125
 Ser Gln Gln Ser Thr Ser Met Thr Pro Phe Gly Arg Pro Ala Thr Asp
 130 135 140
 Leu Pro Glu Ala Ser Glu Gly Gln Val Thr Phe Thr Gln Leu Gly Ser
 145 150 155 160
 Tyr Pro Leu Pro Pro Pro Val Gly Glu Gln Val Phe Ser Cys His His
 165 170 175
 Cys Gly Lys Asn Leu Ser Gln Asp Met Leu Leu Thr His Gln Cys Ser
 180 185 190
 His Ala Thr Glu His Pro Leu Pro Cys Ala Gln Cys Pro Lys His Phe
 195 200 205
 Thr Pro Gln Ala Asp Leu Ser Thr Ser Gln Asp His Ala Ser Glu
 210 215 220
 Thr Pro Pro Thr Cys Pro His Cys Ala Arg Thr Phe Thr His Pro Ser
 225 230 235 240
 Arg Leu Thr Tyr His Leu Arg Val His Asn Ser Thr Glu Arg Pro Phe
 245 250 255
 Pro Cys Pro Asp Cys Pro Lys Arg Phe Ala Asp Gln Ala Arg Leu Thr
 260 265 270
 Ser His Arg Arg Ala His Ala Ser Glu Arg Pro Phe Arg Cys Ala Gln
 275 280 285
 Cys Gly Arg Ser Phe Ser Leu Lys Ile Ser Leu Leu Leu His Gln Arg
 290 295 300
 Gly His Ala Gln Glu Arg Pro Phe Ser Cys Pro Gln Cys Gly Ile Asp
 305 310 315 320
 Phe Asn Gly His Ser Ala Leu Ile Arg His Gln Met Ile His Thr Gly
 325 330 335
 Glu Arg Pro Tyr Pro Cys Thr Asp Cys Ser Lys Ser Phe Met Arg Lys
 340 345 350
 Glu His Leu Leu Asn His Arg Arg Leu His Thr Gly Glu Arg Pro Phe
 355 360 365
 Ser Cys Pro His Cys Gly Lys Ser Phe Ile Arg Lys His His Leu Met
 370 375 380
 Lys His Gln Arg Ile His Thr Gly Glu Arg Pro Tyr Pro Cys Ser Tyr
 385 390 395 400

Cys Gly Arg Ser Phe Arg Tyr Lys Gln Thr Leu Lys Asp His Leu Arg
 405 410 415
 Ser Gly His Asn Gly Gly Cys Gly Gly Asp Ser Asp Pro Ser Gly Gln
 420 425 430
 Pro Pro Asn Pro Pro Gly Pro Leu Ile Thr Gly Leu Glu Thr Ser Gly
 435 440 445
 Leu Gly Val Asn Thr Glu Gly Leu Glu Thr Asn Gln Trp Tyr Gly Glu
 450 455 460
 Gly Ser Gly Gly Gly Val Leu *
 465 470 471

<210> 1086
 <211> 736
 <212> PRT
 <213> Homo sapiens

<400> 1086
 Ser Cys Gly His Lys Ser Ala Tyr Gly Ser Tyr Thr Gly Leu Gln Leu
 1 5 10 15
 Phe Trp Glu Asp Gly Gln Glu Leu Leu Gln His Gln Gln Leu Gln Asp
 20 25 30
 Leu Arg Leu Cys Val His Leu Arg Pro Gln Ser Glu Lys Val Glu Leu
 35 40 45
 Ser Leu Trp Thr Leu Phe Val Val Gly Lys Gly Glu Pro Ser Ala Val
 50 55 60
 Arg Glu Lys Leu Gly Lys Ala Gly Phe Ala Ala Ala Ser Gly Pro Gly
 65 70 75 80
 Gly Arg Pro Gly Ala Glu Arg Ala Ser Thr Val Leu Asn Ile Leu His
 85 90 95
 Leu Thr Ala Glu Ser Arg Trp Glu Pro Asn Ala Cys Asn Arg Val Ser
 100 105 110
 Ser Ser Pro Ala Gly Val Gly Pro Leu Asp Leu Pro Val Gly Pro Leu
 115 120 125
 Leu Tyr Phe Phe Ala Pro Trp Ala Arg Ala Ser Phe Leu Cys His Ala
 130 135 140
 Phe Gln Arg Pro Leu Thr Gly Ile Gly Leu Asn Thr Val Arg Phe Thr
 145 150 155 160
 Ser Glu Phe Pro Leu His Ser Lys Asp Pro Thr Ala His Lys Leu Leu
 165 170 175
 Phe Thr Gly Asn Tyr Leu Cys Lys Leu His Pro Arg Pro Arg His Ala
 180 185 190
 Pro Gln Gly Ser Leu Ser Asp Phe Cys His Gly Thr Glu Gly Lys Asp
 195 200 205
 Leu Pro Ser Glu His Asn Val Ser Val Glu Gly Val Ala Gln Asp Arg
 210 215 220
 Ser Pro Glu Ala Thr Leu Cys Pro Gln Lys Thr Cys Pro Cys Asp Ile
 225 230 235 240
 Cys Gly Leu Arg Leu Lys Asp Ile Leu His Leu Ala Glu His Gln Thr
 245 250 255
 Thr His Pro Arg Gln Lys Pro Phe Val Cys Glu Ala Tyr Val Lys Gly
 260 265 270
 Ser Glu Phe Ser Ala Asn Leu Pro Gln Lys Gln Val Gln Gln Asn Val
 275 280 285
 His Asn Pro Ile Arg Thr Glu Glu Gly Gln Ala Ser Pro Val Lys Thr
 290 295 300
 Cys Arg Asp His Thr Ser Asp Gln Leu Ser Thr Cys Arg Glu Gly Gly
 305 310 315 320
 Lys Asp Phe Val Ala Thr Ala Gly Phe Leu Gln Cys Glu Val Thr Pro
 325 330 335
 Ser Asp Gly Glu Pro His Glu Ala Thr Glu Gly Val Val Asp Phe His
 340 345 350

```

Ile Ala Leu Arg His Asn Lys Cys Cys Glu Ser Gly Asp Ala Phe Asn
    355                      360                      365
Asn Lys Ser Thr Leu Val Gln His Gln Arg Ile His Ser Arg Glu Arg
    370                      375                      380
Pro Tyr Glu Cys Ser Lys Cys Gly Ile Phe Phe Thr Tyr Ala Ala Asp
    385                      390                      395                      400
Leu Thr Gln His Gln Lys Val His Asn Arg Gly Lys Pro Tyr Glu Cys
    405                      410                      415
Cys Glu Cys Gly Lys Phe Phe Ser Gln His Ser Ser Leu Val Lys His
    420                      425                      430
Arg Arg Val His Thr Gly Glu Ser Pro His Val Cys Gly Asp Cys Gly
    435                      440                      445
Lys Phe Phe Ser Arg Ser Ser Asn Leu Ile Gln His Lys Arg Val His
    450                      455                      460
Thr Gly Glu Lys Pro Tyr Glu Cys Ser Asp Cys Gly Lys Phe Phe Ser
    465                      470                      475                      480
Gln Arg Ser Asn Leu Ile His His Lys Arg Val His Thr Gly Arg Ser
    485                      490                      495
Ala His Glu Cys Ser Glu Cys Gly Lys Ser Phe Asn Cys Asn Ser Ser
    500                      505                      510
Leu Ile Lys His Trp Arg Val His Thr Gly Glu Arg Pro Tyr Lys Cys
    515                      520                      525
Asn Glu Cys Gly Lys Phe Phe Ser His Ile Ala Ser Leu Ile Gln His
    530                      535                      540
Gln Ile Val His Thr Gly Glu Arg Pro His Gly Cys Gly Glu Cys Gly
    545                      550                      555                      560
Lys Ala Phe Ile Arg Ser Ser Asp Leu Met Lys His Gln Arg Val His
    565                      570                      575
Thr Gly Glu Arg Pro Tyr Glu Cys Asn Glu Cys Gly Lys Leu Phe Ser
    580                      585                      590
Gln Ser Ser Ser Leu Asn Ser His Arg Arg Leu His Thr Gly Glu Arg
    595                      600                      605
Pro Tyr Gln Cys Ser Glu Cys Gly Lys Phe Phe Asn Gln Ser Ser Ser
    610                      615                      620
Leu Asn Asn His Arg Arg Leu His Thr Gly Glu Arg Pro Tyr Glu Cys
    625                      630                      635                      640
Ser Glu Cys Gly Lys Thr Phe Arg Gln Arg Ser Asn Leu Arg Gln His
    645                      650                      655
Leu Lys Val His Lys Pro Asp Arg Pro Tyr Glu Cys Ser Glu Cys Gly
    660                      665                      670
Lys Ala Phe Asn Gln Arg Pro Thr Leu Ile Arg His Gln Lys Ile His
    675                      680                      685
Ile Arg Glu Arg Ser Met Glu Asn Val Leu Leu Pro Cys Ser Gln His
    690                      695                      700
Thr Pro Glu Ile Ser Ser Glu Asn Arg Pro Tyr Gln Gly Ala Val Asn
    705                      710                      715                      720
Tyr Lys Leu Lys Leu Val His Pro Ser Thr His Pro Gly Glu Val Pro
    725                      730                      735 736

```

<210> 1087

<211> 863

<212> PRT

<213> Homo sapiens

<400> 1087

```

Met Gly Asn Arg Glu Met Glu Glu Leu Ile Pro Leu Val Asn Arg Leu
  1                      5                      10                      15
Gln Asp Ala Phe Ser Ala Leu Gly Gln Ser Cys Leu Leu Glu Leu Pro
    20                      25                      30

```

Gln Ile Ala Val Val Gly Gly Gln Ser Ala Gly Lys Ser Ser Val Leu
 35 40 45
 Glu Asn Phe Val Gly Arg Asp Phe Leu Pro Arg Gly Ser Gly Ile Val
 50 55 60
 Thr Arg Arg Pro Leu Val Leu Gln Leu Val Thr Ser Lys Ala Glu Tyr
 65 70 75 80
 Ala Glu Phe Leu His Cys Lys Gly Lys Lys Phe Thr Asp Phe Asp Glu
 85 90 95
 Val Arg Leu Glu Ile Glu Ala Glu Thr Asp Arg Val Thr Gly Met Asn
 100 105 110
 Lys Gly Ile Ser Ser Ile Pro Ile Asn Leu Arg Val Tyr Ser Pro His
 115 120 125
 Val Leu Asn Leu Thr Leu Ile Asp Leu Pro Gly Ile Thr Lys Val Pro
 130 135 140
 Val Gly Asp Gln Pro Pro Asp Ile Glu Tyr Gln Ile Arg Met Ile Met
 145 150 155 160
 Gln Phe Ile Thr Arg Glu Asn Cys Leu Ile Leu Ala Val Thr Pro Ala
 165 170 175
 Asn Thr Asp Leu Ala Asn Ser Asp Ala Leu Lys Leu Ala Lys Glu Val
 180 185 190
 Asp Pro Gln Gly Leu Arg Thr Ile Gly Val Ile Thr Lys Leu Asp Leu
 195 200 205
 Met Asp Glu Gly Thr Asp Ala Arg Asp Val Leu Glu Asn Lys Leu Leu
 210 215 220
 Pro Leu Arg Arg Gly Tyr Val Gly Val Val Asn Arg Ser Gln Lys Asp
 225 230 235 240
 Ile Asp Gly Lys Lys Asp Ile Lys Ala Ala Met Leu Ala Glu Arg Lys
 245 250 255
 Phe Phe Leu Ser His Pro Ala Tyr Arg His Ile Ala Asp Arg Met Gly
 260 265 270
 Thr Pro His Leu Gln Lys Val Leu Asn Gln Gln Leu Thr Asn His Ile
 275 280 285
 Arg Asp Thr Leu Pro Asn Phe Arg Asn Lys Leu Gln Gly Gln Leu Leu
 290 295 300
 Ser Ile Glu His Glu Val Glu Ala Tyr Lys Asn Phe Lys Pro Glu Asp
 305 310 315 320
 Pro Thr Arg Lys Thr Lys Ala Leu Leu Gln Met Val Gln Gln Phe Ala
 325 330 335
 Val Asp Phe Glu Lys Arg Ile Glu Gly Ser Gly Asp Gln Val Asp Thr
 340 345 350
 Leu Glu Leu Ser Gly Gly Ala Lys Ile Asn Arg Ile Phe His Glu Arg
 355 360 365
 Phe Pro Phe Glu Ile Val Lys Met Glu Phe Asn Glu Lys Glu Leu Arg
 370 375 380
 Arg Glu Ile Ser Tyr Ala Ile Lys Asn Ile His Gly Ile Arg Thr Gly
 385 390 395 400
 Leu Phe Thr Pro Asp Met Ala Phe Glu Ala Ile Val Lys Lys Gln Ile
 405 410 415
 Val Lys Leu Lys Gly Pro Ser Leu Lys Ser Val Asp Leu Val Ile Gln
 420 425 430
 Glu Leu Ile Asn Thr Val Lys Lys Cys Thr Lys Lys Leu Ala Asn Phe
 435 440 445
 Pro Arg Leu Cys Glu Glu Thr Glu Arg Ile Val Ala Asn His Ile Arg
 450 455 460
 Glu Arg Glu Gly Lys Thr Lys Asp Gln Val Leu Leu Ile Asp Ile
 465 470 475 480
 Gln Val Ser Tyr Ile Asn Thr Asn His Glu Asp Phe Ile Gly Phe Ala
 485 490 495
 Asn Ala Gln Gln Arg Ser Ser Gln Val His Lys Lys Thr Thr Val Gly
 500 505 510
 Asn Gln Val Ile Arg Lys Gly Trp Leu Thr Ile Ser Asn Ile Gly Ile
 515 520 525
 Met Lys Gly Gly Ser Lys Gly Tyr Trp Phe Val Leu Thr Ala Glu Ser
 530 535 540

Leu Ser Trp Tyr Lys Asp Asp Glu Glu Lys Glu Lys Lys Tyr Met Leu
 545 550 555 560
 Pro Leu Asp Asn Leu Lys Val Arg Asp Val Glu Lys Ser Phe Met Ser
 565 570 575
 Ser Lys His Ile Phe Ala Leu Phe Asn Thr Glu Gln Arg Asn Val Tyr
 580 585 590
 Lys Asp Tyr Arg Phe Leu Glu Leu Ala Cys Asp Ser Gln Glu Asp Val
 595 600 605
 Asp Ser Trp Lys Ala Ser Leu Leu Arg Ala Gly Val Tyr Pro Asp Lys
 610 615 620
 Ser Val Gly Asn Asn Lys Ala Glu Asn Asp Glu Asn Gly Gln Ala Glu
 625 630 635 640
 Asn Phe Ser Met Asp Pro Gln Leu Glu Arg Gln Val Glu Thr Ile Arg
 645 650 655
 Asn Leu Val Asp Ser Tyr Met Ser Ile Ile Asn Lys Cys Ile Arg Asp
 660 665 670
 Leu Ile Pro Lys Thr Ile Met His Leu Met Ile Asn Asn Val Lys Asp
 675 680 685
 Phe Ile Asn Ser Glu Leu Leu Ala Gln Leu Tyr Ser Ser Glu Asp Gln
 690 695 700
 Asn Thr Leu Met Glu Glu Ser Ala Glu Gln Ala Gln Arg Arg Asp Glu
 705 710 715 720
 Met Leu Arg Met Tyr Gln Ala Leu Lys Glu Ala Leu Gly Ile Ile Gly
 725 730 735
 Asp Ile Ser Thr Ala Thr Val Ser Thr Pro Ala Pro Pro Pro Val Asp
 740 745 750
 Asp Ser Trp Ile Gln His Ser Arg Arg Ser Pro Pro Pro Ser Pro Thr
 755 760 765
 Thr Gln Arg Arg Pro Thr Leu Ser Ala Pro Leu Ala Arg Pro Thr Ser
 770 775 780
 Gly Arg Gly Pro Ala Pro Ala Ile Pro Ser Pro Gly Pro His Ser Gly
 785 790 795 800
 Ala Pro Pro Val Pro Phe Arg Pro Gly Pro Leu Pro Pro Phe Pro Ser
 805 810 815
 Ser Ser Asp Ser Phe Gly Ala Pro Pro Gln Val Pro Ser Arg Pro Thr
 820 825 830
 Arg Ala Pro Pro Ser Val Pro Ser Arg Arg Pro Pro Pro Ser Pro Thr
 835 840 845
 Arg Pro Thr Ile Ile Arg Pro Leu Glu Ser Ser Leu Leu Asp *
 850 855 860 862

<210> 1088

<211> 293

<212> PRT

<213> Homo sapiens

<400> 1088

Met Pro Arg Asn Arg His Glu Ala Thr Gly Arg Thr Pro Arg Ser Pro
 1 5 10 15
 Ser Ala Cys Ser Gly Val Gly Val Leu Pro Ala Leu Arg Met Arg Gly
 20 25 30
 Asn Leu Ala Leu Val Gly Val Leu Ile Ser Leu Ala Phe Leu Ser Leu
 35 40 45
 Leu Pro Ser Gly His Pro Gln Pro Ala Gly Asp Asp Ala Cys Ser Val
 50 55 60
 Gln Ile Leu Val Pro Gly Leu Lys Gly Asp Ala Gly Glu Lys Gly Asp
 65 70 75 80
 Lys Gly Ala Pro Gly Arg Pro Gly Arg Val Gly Pro Thr Gly Glu Lys
 85 90 95
 Gly Asp Met Gly Asp Lys Gly Gln Lys Gly Ser Val Gly Arg His Gly
 100 105 110

Lys Ile Gly Pro Ile Gly Ser Lys Gly Glu Lys Gly Asp Ser Gly Asp
 115 120 125
 Ile Gly Pro Pro Gly Pro Asn Gly Glu Pro Gly Leu Pro Cys Glu Cys
 130 135 140
 Ser Gln Leu Arg Lys Ala Ile Gly Glu Met Asp Asn Gln Val Ser Gln
 145 150 155 160
 Leu Thr Ser Glu Leu Lys Phe Ile Lys Asn Ala Val Ala Gly Val Arg
 165 170 175
 Glu Thr Glu Ser Lys Ile Tyr Leu Leu Val Lys Glu Glu Lys Arg Tyr
 180 185 190
 Ala Asp Ala Gln Leu Ser Cys Gln Gly Arg Gly Gly Thr Leu Ser Met
 195 200 205
 Pro Lys Asp Glu Ala Ala Asn Gly Leu Met Ala Ala Tyr Leu Ala Gln
 210 215 220
 Ala Gly Leu Ala Arg Val Phe Ile Gly Ile Asn Asp Leu Glu Lys Glu
 225 230 235 240
 Gly Ala Phe Val Tyr Ser Asp His Ser Pro Met Arg Thr Phe Asn Lys
 245 250 255
 Trp Arg Ser Gly Glu Pro Asn Asn Ala Tyr Asp Glu Glu Asp Cys Val
 260 265 270
 Glu Met Val Ala Ser Gly Gly Trp Asn Asp Val Ala Cys His Thr Thr
 275 280 285
 Met Tyr Phe Met *
 290 292

<210> 1089
 <211> 269
 <212> PRT
 <213> Homo sapiens

<400> 1089
 Met Pro Arg Asn Arg His Glu Ala Thr Gly Arg Thr Pro Arg Ser Pro
 1 5 10 15
 Ser Ala Cys Ser Gly Val Gly Val Leu Pro Ala Leu Arg Met Arg Gly
 20 25 30
 Asn Leu Ala Leu Val Gly Val Leu Ile Ser Leu Ala Phe Leu Ser Leu
 35 40 45
 Leu Pro Ser Gly His Pro Gln Pro Ala Gly Asp Asp Ala Cys Ser Val
 50 55 60
 Gln Ile Leu Val Pro Gly Leu Lys Gly Asp Ala Gly Glu Lys Gly Asp
 65 70 75 80
 Lys Gly Ala Pro Gly Arg Pro Gly Arg Val Gly Pro Thr Gly Glu Lys
 85 90 95
 Gly Glu Lys Gly Asp Ser Gly Asp Ile Gly Pro Pro Gly Pro Asn Gly
 100 105 110
 Glu Pro Gly Leu Pro Cys Glu Cys Ser Gln Leu Arg Lys Ala Ile Gly
 115 120 125
 Glu Met Asp Asn Gln Val Ser Gln Leu Thr Ser Glu Leu Lys Phe Ile
 130 135 140
 Lys Asn Ala Val Ala Gly Val Arg Glu Thr Glu Ser Lys Ile Tyr Leu
 145 150 155 160
 Leu Val Lys Glu Glu Lys Arg Tyr Ala Asp Ala Gln Leu Ser Cys Gln
 165 170 175
 Gly Arg Gly Gly Thr Leu Ser Met Pro Lys Asp Glu Ala Ala Asn Gly
 180 185 190
 Leu Met Ala Ala Tyr Leu Ala Gln Ala Gly Leu Ala Arg Val Phe Ile
 195 200 205
 Gly Ile Asn Asp Leu Glu Lys Glu Gly Ala Phe Val Tyr Ser Asp His
 210 215 220
 Ser Pro Met Arg Thr Phe Asn Lys Trp Arg Ser Gly Glu Pro Asn Asn
 225 230 235 240

```
<210> 1090
<211> 243
<212> PRT
<213> Homo sapiens
```

```
<210> 1091
<211> 11
<212> PRT
<213> Homo sapiens
```

```
<210> 1092
<211> 62
<212> PRT
```

<213> Homo sapiens

<400> 1092

```

Met Asp Pro Asn Cys Ser Cys Ala Ala Gly Asp Ser Cys Thr Cys Ala
 1          5          10          15
Gly Ser Cys Lys Cys Lys Glu Cys Lys Cys Thr Ser Cys Lys Lys Ser
          20          25          30
Cys Cys Ser Cys Cys Pro Val Gly Cys Ala Lys Cys Ala Gln Gly Cys
          35          40          45
Ile Cys Lys Gly Ala Ser Asp Lys Cys Ser Cys Cys Ala *
 50          55          60 61

```

<210> 1093

<211> 86

<212> PRT

<213> Homo sapiens

<400> 1093

```

Met Ala Ser Asp Leu Asp Phe Ser Pro Pro Glu Val Pro Glu Pro Thr
 1          5          10          15
Phe Leu Glu Asn Leu Leu Arg Tyr Gly Leu Phe Leu Gly Ala Ile Phe
          20          25          30
Gln Leu Ile Cys Val Leu Ala Ile Ile Val Pro Ile Pro Lys Ser His
          35          40          45
Glu Ala Glu Ala Glu Pro Ser Glu Pro Arg Ser Ala Glu Val Thr Arg
          50          55          60
Lys Pro Lys Ala Ala Val Pro Ser Val Asn Lys Arg Pro Lys Lys Glu
          65          70          75          80
Thr Lys Lys Lys Arg *
          85

```

<210> 1094

<211> 132

<212> PRT

<213> Homo sapiens

<400> 1094

```

Met Cys Ile Leu Arg Arg His Thr Asp Ile Ser Gln Ser Val Ser Asn
 1          5          10          15
Gly Leu Ile Ala Ile Lys Phe Gly Ser Phe Thr Tyr Ala Thr Thr Glu
          20          25          30
Lys Val Arg Arg Ser Ile Tyr Ser Cys Leu Asp Ala Gln Phe Tyr Asp
          35          40          45
Asp Glu Thr Val Thr Val Val Leu Lys Asp Thr Val Gly Arg Glu Gly
          50          55          60
Arg Asp Arg Leu Leu Val Gln Leu Pro Leu Ser Leu Val Tyr Asn Ser
          65          70          75          80
Glu Asp Ser Ala Glu Tyr Gln Phe Thr Gly Thr Tyr Ser Thr Arg Leu
          85          90          95
Asp Glu Gln Cys Ser Ala Ile Pro Thr Arg Thr Met His Phe Glu Lys
          100          105          110
His Trp Arg Leu Leu Glu Ser Met Lys Ala Gln Tyr Val Ala Gly Asn
          115          120          125
Gly Phe Arg Lys
          130          132

```


<210> 1095
 <211> 260
 <212> PRT
 <213> Homo sapiens

<400> 1095
 Phe Ala Tyr Gln Ser Ser Glu Val Asp Trp Cys Glu Ser Asn Phe Gln
 1 5 10 15
 Tyr Ser Glu Leu Val Ala Glu Phe Tyr Asn Thr Phe Ser Asn Ile Pro
 20 25 30
 Phe Phe Ile Phe Gly Pro Leu Met Met Leu Leu Met His Pro Tyr Ala
 35 40 45
 Gln Lys Arg Ser Arg Tyr Ile Tyr Val Val Trp Val Leu Phe Met Ile
 50 55 60
 Ile Gly Leu Phe Ser Met Tyr Phe His Met Thr Leu Ser Phe Leu Gly
 65 70 75 80
 Gln Leu Leu Asp Glu Ile Ala Ile Leu Trp Leu Leu Gly Ser Gly Tyr
 85 90 95
 Ser Ile Trp Met Pro Arg Cys Tyr Phe Pro Ser Phe Leu Gly Gly Asn
 100 105 110
 Arg Ser Gln Phe Ile Arg Leu Val Phe Ile Thr Thr Val Val Ser Thr
 115 120 125
 Leu Leu Ser Phe Leu Arg Pro Thr Val Asn Ala Tyr Ala Leu Asn Ser
 130 135 140
 Ile Ala Leu His Ile Leu Tyr Ile Val Cys Gln Glu Tyr Arg Lys Thr
 145 150 155 160
 Ser Asn Lys Glu Leu Arg His Leu Ile Glu Val Ser Val Val Leu Trp
 165 170 175
 Ala Val Ala Leu Thr Ser Trp Ile Ser Asp Arg Leu Leu Cys Ser Phe
 180 185 190
 Trp Gln Arg Ile His Phe Phe Tyr Leu His Ser Ile Trp His Val Leu
 195 200 205
 Ile Ser Ile Thr Phe Pro Tyr Gly Met Val Thr Met Ala Leu Val Asp
 210 215 220
 Ala Asn Tyr Glu Met Pro Gly Glu Thr Leu Lys Val Arg Tyr Trp Pro
 225 230 235 240
 Arg Asp Ser Trp Pro Val Gly Leu Pro Tyr Val Glu Ile Arg Gly Asp
 245 250 255
 Asp Lys Asp Cys
 260

<210> 1096
 <211> 197
 <212> PRT
 <213> Homo sapiens

<400> 1096
 Met Ala Asp Gly Gln Met Pro Phe Ser Cys His Tyr Pro Ser Arg Leu
 1 5 10 15
 Arg Arg Asp Pro Phe Arg Asp Ser Pro Leu Ser Ser Arg Leu Asp
 20 25 30
 Asp Gly Phe Gly Met Asp Pro Phe Pro Asp Asp Leu Thr Ala Ser Trp
 35 40 45
 Pro Asp Trp Ala Leu Pro Arg Leu Ser Ser Ala Trp Pro Gly Thr Leu
 50 55 60
 Arg Ser Gly Met Val Pro Arg Gly Pro Thr Ala Thr Ala Arg Phe Gly
 65 70 75 80
 Val Pro Ala Glu Gly Arg Thr Pro Pro Phe Pro Gly Glu Pro Trp
 85 90 95

Lys Val Cys Val Asn Val His Ser Phe Lys Pro Glu Glu Leu Met Val
 100 105 110
 Lys Thr Lys Asp Gly Tyr Val Glu Val Ser Gly Lys His Glu Glu Lys
 115 120 125
 Gln Gln Glu Gly Gly Ile Val Ser Lys Asn Phe Thr Lys Lys Ile Gln
 130 135 140
 Leu Pro Ala Glu Val Asp Pro Val Thr Val Phe Ala Ser Leu Ser Pro
 145 150 155 160
 Glu Gly Leu Leu Ile Ile Glu Ala Pro Gln Val Pro Pro Tyr Ser Thr
 165 170 175
 Phe Gly Glu Ser Ser Phe Asn Asn Glu Leu Pro Gln Asp Ser Gln Glu
 180 185 190
 Val Thr Cys Thr *
 195 196

<210> 1097
 <211> 961
 <212> PRT
 <213> Homo sapiens

<400> 1097
 Met Asp Pro Met Ser Leu Glu Ser Leu Leu Ser Asp Asp Leu Val Ala
 1 5 10 15
 Phe Glu His Gln Trp Thr Ser Phe Phe Ala Asn Phe Asp Thr Glu Ile
 20 25 30
 Pro Phe Leu Leu Glu Leu Ser Glu Ser Gln Ala Gly Glu Cys Gly Gly
 35 40 45
 Ala Arg Asn Ser Thr Gly His Gln Leu Ile Asp Val Gly Ile Ile Ile
 50 55 60
 His Ile Pro Asn Arg Gln Pro Phe Val Leu Phe Gly Asn His Ser Thr
 65 70 75 80
 Arg Glu Asn Leu Asn Ala Gly Asn Phe Asn Phe Pro Ser Glu Gly His
 85 90 95
 Leu Val Arg Ser Thr Gly Pro Gly Gly Ser Phe Ala Lys His Met Val
 100 105 110
 Ala Gln Cys Val Ser Pro Lys Gly Pro Leu Ala Cys Ser Arg Thr Tyr
 115 120 125
 Phe Phe Gly Ala Thr His Val Pro Tyr Leu Gly Gly Asp Ser Lys Leu
 130 135 140
 Pro Lys Lys Thr Glu Gln Ile Arg Leu Leu Ser Gln Ile Tyr Ala Ala
 145 150 155 160
 Val Ile Glu Ala Val Leu Ala Gly Ile Ala Cys Tyr Ala Lys Thr Ser
 165 170 175
 Ser Leu Thr Lys Ala Lys Glu Val Ala Glu Gln Thr Leu Gly Ser Gly
 180 185 190
 Leu Asp Ser Phe Glu Leu Ile Pro Phe Lys Ala Ala Leu Arg Ser Lys
 195 200 205
 Met Thr Phe His Ile His Ala Val Asn Asn Gln Gly Arg Ile Val Pro
 210 215 220
 Leu Asp Ser Glu Asp Ser Leu Ser Phe Val Lys Thr Ala Cys Met Ala
 225 230 235 240
 Val Tyr Asp Ile Pro Asp Leu Leu Gly Gly Asn Gly Cys Leu Gly Ser
 245 250 255
 Val Val Phe Ser Glu Ser Phe Leu Thr Ser Gln Ile Leu Val Lys Glu
 260 265 270
 Lys Asp Gly Thr Val Thr Thr Glu Thr Ser Ser Val Val Leu Thr Ala
 275 280 285
 Ala Val Pro Arg Phe Cys Ser Trp Leu Val Glu Asp Asn Glu Val Lys
 290 295 300
 Leu Ser Glu Lys Thr Gln Gln Ala Val Arg Gly Asp Glu Ser Phe Leu
 305 310 315 320

Gly Thr Tyr Leu Thr Gly Gly Glu Gly Ala Tyr Leu Tyr Ser Ser Asn	325	330	335
Leu Gln Ser Trp Pro Glu Glu Gly Asn Val His Phe Phe Ser Ser Gly	340	345	350
Leu Leu Phe Ser His Cys Arg His Gly Ser Ile Ile Ile Ser Lys Asp	355	360	365
His Met Asn Ser Ile Ser Phe Tyr Asp Gly Asp Ser Thr Ser Thr Val	370	375	380
Ala Ala Leu Leu Ile Asp Phe Lys Ser Ser Leu Leu Pro His Leu Pro	385	390	395
Val His Phe His Gly Ser Ser Asn Phe Leu Met Ile Ala Leu Phe Pro	405	410	415
Lys Ser Lys Ile Tyr Gln Ala Phe Tyr Ser Glu Val Phe Ser Leu Trp	420	425	430
Lys Gln Gln Asp Asn Ser Gly Ile Ser Leu Lys Val Ile Gln Glu Asp	435	440	445
Gly Leu Ser Val Glu Gln Lys Arg Leu His Ser Ser Ala Gln Lys Leu	450	455	460
Phe Ser Ala Leu Ser Gln Pro Ala Gly Glu Lys Arg Ser Ser Leu Lys	465	470	475
Leu Leu Ser Ala Lys Leu Pro Glu Leu Asp Trp Phe Leu Gln His Phe	485	490	495
Ala Ile Ser Ser Ile Ser Gln Glu Pro Val Met Arg Thr His Leu Pro	500	505	510
Val Leu Leu Gln Gln Ala Glu Ile Asn Thr Thr His Arg Ile Glu Ser	515	520	525
Asp Lys Val Ile Ile Ser Ile Val Thr Gly Leu Pro Gly Cys His Ala	530	535	540
Ser Glu Leu Cys Ala Phe Leu Val Thr Leu His Lys Glu Cys Gly Arg	545	550	555
Trp Met Val Tyr Arg Gln Ile Met Asp Ser Ser Glu Cys Phe His Ala	565	570	575
Ala His Phe Gln Arg Tyr Leu Ser Ser Ala Leu Glu Ala Gln Gln Asn	580	585	590
Arg Ser Ala Arg Gln Ser Ala Tyr Ile Arg Lys Lys Thr Arg Leu Leu	595	600	605
Val Val Leu Gln Gly Tyr Thr Asp Val Ile Asp Val Val Gln Ala Leu	610	615	620
Gln Thr His Pro Asp Ser Asn Val Lys Ala Ser Phe Thr Ile Gly Ala	625	630	635
Ile Thr Ala Cys Val Glu Pro Met Ser Cys Tyr Met Glu His Arg Phe	645	650	655
Leu Phe Pro Lys Cys Leu Asp Gln Cys Ser Gln Gly Leu Val Ser Asn	660	665	670
Val Val Phe Thr Ser His Thr Thr Glu Gln Arg His Pro Leu Leu Val	675	680	685
Gln Leu Gln Ser Leu Ile Arg Ala Ala Asn Pro Ala Ala Ala Phe Ile	690	695	700
Leu Ala Glu Asn Gly Ile Val Thr Arg Asn Glu Asp Ile Glu Leu Ile	705	710	715
Leu Ser Glu Asn Ser Phe Ser Ser Pro Glu Met Leu Arg Ser Arg Tyr	725	730	735
Leu Met Tyr Pro Gly Trp Tyr Glu Gly Lys Leu Asn Ala Gly Ser Val	740	745	750
Tyr Pro Leu Met Val Gln Ile Cys Val Trp Phe Gly Arg Pro Leu Glu	755	760	765
Lys Thr Arg Phe Val Ala Lys Cys Lys Ala Ile Gln Ser Ser Ile Lys	770	775	780
Pro Ser Pro Phe Ser Gly Asn Ile Tyr His Ile Leu Gly Lys Val Lys	785	790	795
Phe Ser Asp Ser Glu Arg Thr Met Glu Val Cys Tyr Asn Thr Leu Ala	805	810	815
Asn Ser Leu Ser Ile Met Pro Val Leu Glu Gly Pro Thr Pro Pro Pro	820	825	830

Asp Ser Lys Ser Val Ser Gln Asp Ser Ser Gly Gln Gln Glu Cys Tyr
 835 840 845
 Leu Val Phe Ile Gly Cys Ser Leu Lys Glu Asp Ser Ile Lys Asp Trp
 850 855 860
 Leu Arg Gln Ser Ala Lys Gln Lys Pro Gln Arg Lys Ala Leu Lys Thr
 865 870 875 880
 Arg Gly Met Leu Thr Gln Gln Glu Ile Arg Ser Ile His Val Lys Arg
 885 890 895
 His Leu Glu Pro Leu Pro Ala Gly Tyr Phe Tyr Asn Gly Thr Gln Phe
 900 905 910
 Val Asn Phe Phe Gly Asp Lys Thr Asp Phe His Pro Leu Met Asp Gln
 915 920 925
 Phe Met Asn Asp Tyr Val Glu Glu Ala Asn Arg Glu Ile Glu Lys Tyr
 930 935 940
 Asn Gln Glu Leu Glu Gln Gln Glu Tyr His Asp Leu Phe Glu Leu Lys
 945 950 955 960
 Pro
 961

<210> 1098
 <211> 127
 <212> PRT
 <213> Homo sapiens

<400> 1098
 Met Ser Ala Ala Gly Ala Arg Gly Leu Arg Ala Thr Tyr His Arg Leu
 1 5 10 15
 Leu Asp Lys Val Glu Leu Met Leu Pro Glu Lys Leu Arg Pro Leu Tyr
 20 25 30
 Asn His Pro Ala Gly Pro Arg Thr Val Phe Phe Trp Ala Pro Ile Met
 35 40 45
 Lys Trp Gly Leu Val Cys Ala Gly Leu Ala Asp Met Ala Arg Pro Ala
 50 55 60
 Glu Lys Leu Ser Thr Ala Gln Ser Ala Val Leu Met Ala Thr Gly Phe
 65 70 75 80
 Ile Trp Ser Arg Tyr Ser Leu Val Ile Ile Pro Lys Asn Trp Ser Leu
 85 90 95
 Phe Ala Val Asn Phe Phe Val Gly Ala Ala Gly Ala Ser Gln Leu Phe
 100 105 110
 Arg Ile Trp Arg Tyr Asn Gln Glu Leu Lys Ala Lys Ala His Lys
 115 120 125 127

<210> 1099
 <211> 325
 <212> PRT
 <213> Homo sapiens

<400> 1099
 Met Ser Leu Leu Arg Ser Leu Arg Val Phe Leu Val Ala Arg Thr Gly
 1 5 10 15
 Ser Tyr Pro Ala Gly Ser Leu Leu Arg Gln Ser Pro Gln Pro Arg His
 20 25 30
 Thr Phe Tyr Ala Gly Pro Arg Leu Ser Ala Ser Ala Ser Lys Glu
 35 40 45
 Leu Leu Met Lys Leu Arg Arg Lys Thr Gly Tyr Ser Phe Val Asn Cys
 50 55 60
 Lys Lys Ala Leu Glu Thr Cys Gly Gly Asp Leu Lys Gln Ala Glu Ile
 65 70 75 80

Trp Leu His Lys Glu Ala Gln Lys Glu Gly Trp Ser Lys Ala Ala Lys
 85 90 95
 Leu Gln Gly Arg Lys Thr Lys Glu Gly Leu Ile Gly Leu Leu Gln Glu
 100 105 110
 Gly Asn Thr Thr Val Leu Val Glu Val Asn Cys Glu Thr Asp Phe Val
 115 120 125
 Ser Arg Asn Leu Lys Phe Gln Leu Leu Val Gln Gln Val Ala Leu Gly
 130 135 140
 Thr Met Met His Cys Gln Thr Leu Lys Asp Gln Pro Ser Ala Tyr Ser
 145 150 155 160
 Lys Gly Phe Leu Asn Ser Ser Glu Leu Ser Gly Leu Pro Ala Gly Pro
 165 170 175
 Asp Arg Glu Gly Ser Leu Lys Asp Gln Leu Ala Leu Ala Ile Gly Lys
 180 185 190
 Leu Gly Glu Asn Met Ile Leu Lys Arg Ala Ala Trp Val Lys Val Pro
 195 200 205
 Ser Gly Phe Tyr Val Gly Ser Tyr Val His Gly Ala Met Gln Ser Pro
 210 215 220
 Ser Leu His Lys Leu Val Leu Gly Lys Tyr Gly Ala Leu Val Ile Cys
 225 230 235 240
 Glu Thr Ser Glu Gln Lys Thr Asn Leu Glu Asp Val Gly Arg Arg Leu
 245 250 255
 Gly Gln His Val Val Gly Met Ala Pro Leu Ser Val Gly Ser Leu Asp
 260 265 270
 Asp Glu Pro Gly Gly Glu Ala Glu Thr Lys Met Leu Ser Gln Pro Tyr
 275 280 285
 Leu Leu Asp Pro Ser Ile Thr Leu Gly Gln Tyr Val Gln Pro Gln Gly
 290 295 300
 Val Ser Val Val Asp Phe Val Arg Phe Glu Cys Gly Glu Gly Glu Glu
 305 310 315 320
 Ala Ala Glu Thr Glu
 325

<210> 1100

<211> 409

<212> PRT

<213> Homo sapiens

<400> 1100

Met Pro Pro Pro Arg Lys His Thr Leu Leu Ala Asn Asn Gly Phe Ala
 1 5 10 15
 Ile Ser Ala Ala Leu Leu Met Ala Cys Ser Leu Gln Ala Gly Ala Phe
 20 25 30
 Glu Met Leu Ile Val Gly Arg Phe Ile Met Gly Ile Asp Gly Gly Val
 35 40 45
 Ala Leu Ser Val Leu Pro Met Tyr Leu Ser Glu Ile Ser Pro Lys Glu
 50 55 60
 Ile Arg Gly Ser Leu Gly Gln Val Thr Ala Ile Phe Ile Cys Ile Gly
 65 70 75 80
 Val Phe Thr Gly Gln Leu Leu Gly Leu Pro Glu Leu Leu Gly Lys Glu
 85 90 95
 Ser Thr Trp Pro Tyr Leu Phe Gly Val Ile Val Val Pro Ala Val Val
 100 105 110
 Gln Leu Leu Ser Leu Pro Phe Leu Pro Asp Ser Pro Arg Tyr Leu Leu
 115 120 125
 Leu Glu Lys His Asn Glu Ala Arg Ala Val Lys Ala Phe Gln Thr Phe
 130 135 140
 Leu Gly Lys Ala Asp Ile Ser Gln Glu Val Glu Glu Val Leu Ala Glu
 145 150 155 160
 Ser Arg Val Gln Arg Ser Ile Arg Leu Val Ser Val Leu Glu Leu Leu
 165 170 175

```

Arg Ala Pro Tyr Val Arg Trp Gln Val Val Thr Val Ile Val Thr Met
      180                      185                      190
Ala Cys Tyr Gln Leu Cys Gly Leu Asn Ala Ile Trp Phe Tyr Thr Asn
      195                      200                      205
Ser Ile Phe Gly Lys Ala Gly Ile Pro Pro Ala Lys Ile Pro Tyr Val
      210                      215                      220
Thr Leu Ser Thr Gly Gly Ile Glu Thr Leu Ala Ala Val Phe Ser Gly
225                      230                      235                      240
Leu Val Ile Glu His Leu Gly Arg Arg Pro Leu Leu Ile Gly Gly Phe
      245                      250                      255
Gly Leu Met Gly Leu Phe Phe Gly Thr Leu Thr Ile Thr Leu Thr Leu
      260                      265                      270
Gln Asp His Ala Pro Trp Val Pro Tyr Leu Ser Ile Val Gly Ile Leu
      275                      280                      285
Ala Ile Ile Ala Ser Phe Cys Ser Gly Pro Gly Gly Ile Pro Phe Ile
      290                      295                      300
Leu Thr Gly Glu Phe Phe Gln Gln Ser Gln Arg Pro Ala Ala Phe Ile
305                      310                      315                      320
Ile Ala Gly Thr Val Asn Trp Leu Ser Asn Phe Ala Val Gly Leu Leu
      325                      330                      335
Phe Pro Phe Ile Gln Lys Ser Leu Asp Thr Tyr Cys Phe Leu Val Phe
      340                      345                      350
Ala Thr Ile Cys Ile Thr Gly Ala Ile Tyr Leu Tyr Phe Val Leu Pro
      355                      360                      365
Glu Thr Lys Asn Arg Thr Tyr Ala Glu Ile Ser Gln Ala Phe Ser Lys
      370                      375                      380
Arg Asn Lys Ala Tyr Pro Pro Glu Glu Lys Ile Asp Ser Ala Val Thr
385                      390                      395                      400
Asp Gly Lys Ile Asn Gly Arg Pro *
      405                      408

```

<210> 1101
 <211> 178
 <212> PRT
 <213> Homo sapiens

```

<400> 1101
Met Pro Lys Ala Lys Gly Lys Thr Arg Arg Gln Lys Phe Gly Tyr Ser
  1                      5                      10                      15
Val Asn Arg Lys Arg Leu Asn Arg Asn Ala Arg Arg Lys Ala Ala Pro
      20                      25                      30
Arg Ile Glu Cys Ser His Ile Arg His Ala Trp Asp His Ala Lys Ser
      35                      40                      45
Val Arg Gln Asn Leu Ala Glu Met Gly Leu Ala Val Asp Pro Asn Arg
      50                      55                      60
Ala Val Pro Leu Arg Lys Arg Lys Val Lys Ala Met Glu Val Asp Ile
      65                      70                      75                      80
Glu Glu Arg Pro Lys Glu Leu Val Arg Lys Pro Tyr Val Leu Asn Asp
      85                      90                      95
Leu Glu Ala Glu Ala Ser Leu Pro Glu Lys Lys Gly Asn Thr Leu Ser
      100                     105                     110
Arg Asp Leu Ile Asp Tyr Val Arg Tyr Met Val Glu Asn His Gly Glu
      115                     120                     125
Asp Tyr Lys Ala Met Ala Arg Asp Glu Lys Asn Tyr Tyr Gln Asp Thr
      130                     135                     140
Pro Lys Gln Ile Arg Ser Lys Ile Asn Val Tyr Lys Arg Phe Tyr Pro
      145                     150                     155                     160
Ala Glu Trp Gln Asp Phe Leu Asp Ser Leu Gln Lys Arg Lys Met Glu
      165                     170                     175
Val Glu
      178

```

<210> 1102
 <211> 527
 <212> PRT
 <213> Homo sapiens

<400> 1102
 Met Ala Asp Ser Arg Asp Pro Ala Ser Asp Gln Met Gln His Trp Lys
 1 5 10 15
 Glu Gln Arg Ala Ala Gln Lys Ala Asp Val Leu Thr Thr Gly Ala Gly
 20 25 30
 Asn Pro Val Gly Asp Lys Leu Asn Val Ile Thr Val Gly Pro Arg Gly
 35 40 45
 Pro Leu Leu Val Gln Asp Val Val Phe Thr Asp Glu Met Ala His Phe
 50 55 60
 Asp Arg Glu Arg Ile Pro Glu Arg Val Val His Ala Lys Gly Ala Gly
 65 70 75 80
 Ala Phe Gly Tyr Phe Glu Val Thr His Asp Ile Thr Lys Tyr Ser Lys
 85 90 95
 Ala Lys Val Phe Glu His Ile Gly Lys Lys Thr Pro Ile Ala Val Arg
 100 105 110
 Phe Ser Thr Val Ala Gly Glu Ser Gly Ser Ala Asp Thr Val Arg Asp
 115 120 125
 Pro Arg Gly Phe Ala Val Lys Phe Tyr Thr Glu Asp Gly Asn Trp Asp
 130 135 140
 Leu Val Gly Asn Asn Thr Pro Ile Phe Phe Ile Arg Asp Pro Ile Leu
 145 150 155 160
 Phe Pro Ser Phe Ile His Ser Gln Lys Arg Asn Pro Gln Thr His Leu
 165 170 175
 Lys Asp Pro Asp Met Val Trp Asp Phe Trp Ser Leu Arg Pro Glu Ser
 180 185 190
 Leu His Gln Val Ser Phe Leu Phe Ser Asp Arg Gly Ile Pro Asp Gly
 195 200 205
 His Arg His Met Asn Gly Tyr Gly Ser His Thr Phe Lys Leu Val Asn
 210 215 220
 Ala Asn Gly Glu Ala Val Tyr Cys Lys Phe His Tyr Lys Thr Asp Gln
 225 230 235 240
 Gly Ile Lys Asn Leu Ser Val Glu Asp Ala Ala Arg Leu Ser Gln Glu
 245 250 255
 Asp Pro Asp Tyr Gly Ile Arg Asp Leu Phe Asn Ala Ile Ala Thr Gly
 260 265 270
 Lys Tyr Pro Ser Trp Thr Phe Tyr Ile Gln Val Met Thr Phe Asn Gln
 275 280 285
 Ala Glu Thr Phe Pro Phe Asn Pro Phe Asp Leu Thr Lys Val Trp Pro
 290 295 300
 His Lys Asp Tyr Pro Leu Ile Pro Val Gly Lys Leu Val Leu Asn Arg
 305 310 315 320
 Asn Pro Val Asn Tyr Phe Ala Glu Val Glu Gln Ile Ala Phe Asp Pro
 325 330 335
 Ser Asn Met Pro Pro Gly Ile Glu Ala Ser Pro Asp Lys Met Leu Gln
 340 345 350
 Gly Arg Leu Phe Ala Tyr Pro Asp Thr His Arg His Arg Leu Gly Pro
 355 360 365
 Asn Tyr Leu His Ile Pro Val Asn Cys Pro Tyr Arg Ala Arg Val Ala
 370 375 380
 Asn Tyr Gln Arg Asp Gly Pro Met Cys Met Gln Asp Asn Gln Gly Gly
 385 390 395 400
 Ala Pro Asn Tyr Tyr Pro Asn Ser Phe Gly Ala Pro Glu Gln Gln Pro
 405 410 415
 Ser Ala Leu Glu His Ser Ile Gln Tyr Ser Gly Glu Val Arg Arg Phe
 420 425 430

```

Asn Thr Ala Asn Asp Asp Asn Val Thr Gln Val Arg Ala Phe Tyr Val
    435                      440                      445
Asn Val Leu Asn Glu Glu Gln Arg Lys Arg Leu Cys Glu Asn Ile Ala
    450                      455                      460
Gly His Leu Lys Asp Ala Gln Ile Phe Ile Gln Lys Lys Ala Val Lys
465                      470                      475                      480
Asn Phe Thr Glu Val His Pro Asp Tyr Gly Ser His Ile Gln Ala Leu
    485                      490                      495
Leu Asp Lys Tyr Asn Ala Glu Lys Pro Lys Asn Ala Ile His Thr Phe
    500                      505                      510
Val Gln Ser Gly Ser His Leu Ala Ala Arg Glu Lys Ala Asn Leu
    515                      520                      525                      527

```

```

<210> 1103
<211> 329
<212> PRT
<213> Homo sapiens

```

```

<400> 1103
Met Thr Gly Asn Ala Gly Glu Trp Cys Leu Met Glu Ser Asp Pro Gly
  1                      5                      10                      15
Val Phe Thr Glu Leu Ile Lys Gly Phe Gly Cys Arg Gly Ala Gln Val
    20                      25                      30
Glu Glu Ile Trp Ser Leu Glu Pro Glu Asn Phe Glu Lys Leu Lys Pro
    35                      40                      45
Val His Gly Leu Ile Phe Leu Phe Lys Trp Gln Pro Gly Glu Glu Pro
    50                      55                      60
Ala Gly Ser Val Val Gln Asp Ser Arg Leu Asp Thr Ile Phe Phe Ala
    65                      70                      75                      80
Lys Gln Val Ile Asn Asn Ala Cys Ala Thr Gln Ala Ile Val Ser Val
    85                      90                      95
Leu Leu Asn Cys Thr His Gln Asp Val His Leu Gly Glu Thr Leu Ser
    100                      105                      110
Glu Phe Lys Glu Phe Ser Gln Ser Phe Asp Ala Ala Met Lys Gly Leu
    115                      120                      125
Ala Leu Ser Asn Ser Asp Val Ile Arg Gln Val His Asn Ser Phe Ala
    130                      135                      140
Arg Gln Gln Met Phe Glu Phe Asp Thr Lys Thr Ser Ala Lys Glu Glu
145                      150                      155                      160
Asp Ala Phe His Phe Val Ser Tyr Val Pro Val Asn Gly Arg Leu Tyr
    165                      170                      175
Glu Leu Asp Gly Leu Arg Glu Gly Pro Ile Asp Leu Gly Ala Cys Asn
    180                      185                      190
Gln Asp Asp Trp Ile Ser Ala Val Arg Pro Val Ile Glu Lys Arg Ile
    195                      200                      205
Gln Lys Tyr Ser Glu Gly Glu Ile Arg Phe Asn Leu Met Ala Ile Val
    210                      215                      220
Ser Asp Arg Lys Met Ile Tyr Glu Gln Lys Ile Ala Glu Leu Gln Arg
225                      230                      235                      240
Gln Leu Ala Glu Glu Glu Pro Met Asp Thr Asp Gln Gly Asn Ser Met
    245                      250                      255
Leu Ser Ala Ile Gln Ser Glu Val Ala Lys Asn Gln Met Leu Ile Glu
    260                      265                      270
Glu Glu Val Gln Lys Leu Lys Arg Tyr Lys Ile Glu Asn Ile Arg Arg
    275                      280                      285
Lys His Asn Tyr Leu Pro Phe Ile Met Glu Leu Leu Lys Thr Leu Ala
    290                      295                      300
Glu His Gln Gln Leu Ile Pro Leu Val Glu Lys Ala Lys Glu Lys Gln
305                      310                      315                      320
Asn Ala Lys Lys Ala Gln Glu Thr Lys
    325                      329

```


<210> 1104
 <211> 749
 <212> PRT
 <213> Homo sapiens

<400> 1104
 Met Ala Glu Leu Gly Ala Gly Gly Asp Gly His Arg Gly Gly Asp Gly
 1 5 10 15
 Ala Val Arg Ser Glu Thr Ala Pro Asp Ser Tyr Lys Val Gln Asp Lys
 20 25 30
 Lys Asn Ala Ser Ser Arg Pro Ala Ser Ala Ile Ser Gly Gln Asn Asn
 35 40 45
 Asn His Ser Gly Asn Lys Pro Asp Pro Pro Pro Val Leu Arg Val Asp
 50 55 60
 Asp Arg Gln Arg Leu Ala Arg Glu Arg Arg Glu Glu Arg Glu Lys Gln
 65 70 75 80
 Leu Ala Ala Arg Glu Ile Val Trp Leu Glu Arg Glu Glu Arg Ala Arg
 85 90 95
 Gln His Tyr Glu Lys His Leu Glu Glu Arg Lys Lys Arg Leu Glu Glu
 100 105 110
 Gln Arg Gln Lys Glu Glu Arg Arg Arg Ala Ala Val Glu Glu Lys Arg
 115 120 125
 Arg Gln Arg Leu Glu Glu Asp Lys Glu Arg His Glu Ala Val Val Arg
 130 135 140
 Arg Thr Met Glu Arg Ser Gln Lys Pro Lys Gln Lys His Asn Arg Trp
 145 150 155 160
 Ser Trp Gly Gly Ser Leu His Gly Ser Pro Ser Ile His Ser Ala Asp
 165 170 175
 Pro Asp Arg Arg Ser Val Ser Thr Met Asn Leu Ser Lys Tyr Val Asp
 180 185 190
 Pro Val Ile Ser Lys Arg Leu Ser Ser Ser Ala Thr Leu Leu Asn
 195 200 205
 Ser Pro Asp Arg Ala Arg Arg Leu Gln Leu Ser Pro Trp Glu Ser Ser
 210 215 220
 Val Val Asn Arg Leu Leu Thr Pro Thr His Ser Phe Leu Ala Arg Ser
 225 230 235 240
 Lys Ser Thr Ala Ala Leu Ser Gly Glu Ala Ala Ser Cys Ser Pro Ile
 245 250 255
 Ile Met Pro Tyr Lys Ala Ala His Ser Arg Asn Ser Met Asp Arg Pro
 260 265 270
 Lys Leu Phe Val Thr Pro Pro Glu Gly Ser Ser Arg Arg Arg Ile Ile
 275 280 285
 His Gly Thr Ala Ser Tyr Lys Lys Glu Arg Glu Arg Glu Asn Val Leu
 290 295 300
 Phe Leu Thr Ser Gly Thr Arg Arg Ala Val Ser Pro Ser Asn Pro Lys
 305 310 315 320
 Ala Arg Gln Pro Ala Arg Ser Arg Leu Trp Leu Pro Ser Lys Ser Leu
 325 330 335
 Pro His Leu Pro Gly Thr Pro Arg Pro Thr Ser Ser Leu Pro Pro Gly
 340 345 350
 Ser Val Lys Ala Ala Pro Ala Gln Val Arg Pro Pro Ser Pro Gly Asn
 355 360 365
 Ile Arg Pro Val Lys Arg Glu Val Lys Val Glu Pro Glu Lys Lys Asp
 370 375 380
 Pro Glu Lys Glu Pro Gln Lys Val Ala Asn Glu Pro Ser Leu Lys Gly
 385 390 395 400
 Arg Ala Pro Leu Val Lys Val Glu Glu Ala Thr Val Glu Glu Arg Thr
 405 410 415
 Pro Ala Glu Pro Glu Val Gly Pro Ala Ala Pro Ala Met Ala Pro Ala
 420 425 430

Pro Ala Ser Ala Pro Ala Pro Ala Ser Ala Pro Ala Pro Ala Pro Val
 435 440 445
 Pro Thr Pro Ala Met Val Ser Ala Pro Ser Ser Thr Val Asn Ala Ser
 450 455 460
 Ala Ser Val Lys Thr Ser Ala Gly Thr Thr Asp Pro Glu Glu Ala Thr
 465 470 475 480
 Arg Leu Leu Ala Glu Lys Arg Arg Leu Ala Arg Glu Gln Arg Glu Lys
 485 490 495
 Glu Glu Arg Glu Arg Arg Glu Gln Glu Glu Leu Glu Arg Gln Lys Arg
 500 505 510
 Glu Glu Leu Ala Gln Arg Val Ala Glu Glu Arg Thr Thr Arg Arg Glu
 515 520 525
 Glu Glu Ser Arg Arg Leu Glu Ala Glu Gln Ala Arg Glu Lys Glu Glu
 530 535 540
 Gln Leu Gln Arg Gln Ala Glu Glu Arg Ala Leu Arg Glu Trp Glu Glu
 545 550 555 560
 Ala Glu Arg Ala Gln Arg Gln Lys Glu Glu Glu Ala Arg Val Arg Glu
 565 570 575
 Glu Ala Glu Arg Val Arg Gln Glu Arg Glu Lys His Phe Gln Arg Glu
 580 585 590
 Glu Gln Glu Arg Leu Glu Arg Lys Lys Arg Leu Glu Glu Ile Met Lys
 595 600 605
 Arg Thr Arg Arg Thr Glu Ala Thr Asp Lys Lys Thr Ser Asp Gln Arg
 610 615 620
 Asn Gly Asp Ile Ala Lys Gly Ala Leu Thr Gly Gly Thr Glu Val Ser
 625 630 635 640
 Ala Leu Pro Cys Thr Thr Asn Ala Pro Gly Asn Gly Lys Pro Val Gly
 645 650 655
 Ser Pro His Val Val Thr Ser His Gln Ser Lys Val Thr Val Glu Ser
 660 665 670
 Thr Pro Asp Leu Glu Lys Gln Pro Asn Glu Asn Gly Val Ser Val Gln
 675 680 685
 Asn Glu Asn Phe Glu Glu Ile Ile Asn Leu Pro Ile Gly Ser Lys Pro
 690 695 700
 Ser Arg Leu Asp Val Thr Asn Ser Glu Ser Pro Glu Ile Pro Leu Asn
 705 710 715 720
 Pro Ile Leu Ala Phe Asp Asp Glu Gly Thr Leu Gly Pro Leu Pro Gln
 725 730 735
 Val Asp Gly Val Gln Thr Gln Gln Thr Ala Glu Val Ile
 740 745 749

<210> 1105

<211> 758

<212> PRT

<213> Homo sapiens

<400> 1105

Met Pro Ala Leu Pro Leu Asp Gln Leu Gln Ile Thr His Lys Asp Pro
 1 5 10 15
 Lys Thr Gly Lys Leu Arg Thr Ser Pro Ala Leu His Pro Glu Gln Lys
 20 25 30
 Ala Asp Arg Tyr Phe Val Leu Tyr Lys Pro Pro Pro Lys Asp Asn Ile
 35 40 45
 Pro Ala Leu Val Glu Glu Tyr Leu Glu Arg Ala Thr Phe Val Ala Asn
 50 55 60
 Asp Leu Asp Trp Leu Leu Ala Leu Pro His Asp Lys Phe Trp Cys Gln
 65 70 75 80
 Val Ile Phe Asp Glu Thr Leu Gln Lys Cys Leu Asp Ser Tyr Leu Arg
 85 90 95
 Tyr Val Pro Arg Lys Phe Asp Glu Gly Val Ala Ser Ala Pro Glu Val
 100 105 110

Val	Asp	Met	Gln	Lys	Arg	Leu	His	Arg	Ser	Val	Phe	Leu	Thr	Phe	Leu
		115					120					125			
Arg	Met	Ser	Thr	His	Lys	Glu	Ser	Lys	Asp	His	Phe	Ile	Ser	Pro	Ser
		130					135				140				
Ala	Phe	Gly	Glu	Ile	Leu	Tyr	Asn	Asn	Phe	Leu	Phe	Asp	Ile	Pro	Lys
		145			150					155					160
Ile	Leu	Asp	Leu	Cys	Val	Leu	Phe	Gly	Lys	Gly	Asn	Ser	Pro	Leu	Leu
				165					170					175	
Gln	Lys	Met	Ile	Gly	Asn	Ile	Phe	Thr	Gln	Gln	Pro	Ser	Tyr	Tyr	Ser
			180					185					190		
Asp	Leu	Asp	Glu	Thr	Leu	Pro	Thr	Ile	Leu	Gln	Val	Phe	Ser	Asn	Ile
		195					200					205			
Leu	Gln	His	Cys	Gly	Leu	Gln	Gly	Asp	Gly	Ala	Asn	Thr	Thr	Pro	Gln
		210				215					220				
Lys	Leu	Glu	Glu	Arg	Gly	Arg	Leu	Thr	Pro	Ser	Asp	Met	Pro	Leu	Leu
		225			230					235					240
Glu	Leu	Lys	Asp	Ile	Val	Leu	Tyr	Leu	Cys	Asp	Thr	Cys	Thr	Thr	Leu
				245					250					255	
Trp	Ala	Phe	Leu	Asp	Ile	Phe	Pro	Leu	Ala	Cys	Gln	Thr	Phe	Gln	Lys
			260					265					270		
His	Asp	Phe	Cys	Tyr	Arg	Leu	Ala	Ser	Phe	Tyr	Glu	Ala	Ala	Ile	Pro
		275					280					285			
Glu	Met	Glu	Ser	Ala	Ile	Lys	Lys	Arg	Arg	Leu	Glu	Asp	Ser	Lys	Leu
		290				295					300				
Leu	Gly	Asp	Leu	Trp	Gln	Arg	Leu	Ser	His	Ser	Arg	Lys	Lys	Leu	Met
		305			310					315					320
Glu	Ile	Phe	His	Ile	Ile	Leu	Asn	Gln	Ile	Cys	Leu	Leu	Pro	Ile	Leu
				325					330					335	
Glu	Ser	Ser	Cys	Asp	Asn	Ile	Gln	Gly	Phe	Ile	Glu	Glu	Phe	Leu	Gln
			340					345					350		
Ile	Phe	Ser	Ser	Leu	Leu	Gln	Glu	Lys	Arg	Phe	Leu	Arg	Asp	Tyr	Asp
		355					360					365			
Ala	Leu	Phe	Pro	Val	Ala	Glu	Asp	Ile	Ser	Leu	Gln	Gln	Ala	Ser	
		370				375					380				
Ser	Val	Leu	Asp	Glu	Thr	Arg	Thr	Ala	Tyr	Ile	Leu	Gln	Ala	Val	Glu
		385			390					395					400
Ser	Ala	Trp	Glu	Gly	Val	Asp	Arg	Arg	Lys	Ala	Thr	Asp	Ala	Lys	Asp
				405					410					415	
Pro	Ser	Val	Ile	Glu	Glu	Pro	Asn	Gly	Glu	Pro	Asn	Gly	Val	Thr	Val
			420					425					430		
Thr	Ala	Glu	Ala	Val	Ser	Gln	Ala	Ser	Ser	His	Pro	Glu	Asn	Ser	Glu
		435					440					445			
Glu	Glu	Glu	Cys	Met	Gly	Ala	Ala	Ala	Ala	Val	Gly	Pro	Ala	Met	Cys
		450				455					460				
Gly	Val	Glu	Leu	Asp	Ser	Leu	Ile	Ser	Gln	Val	Lys	Asp	Leu	Leu	Pro
		465			470					475					480
Asp	Leu	Gly	Glu	Gly	Phe	Ile	Leu	Ala	Cys	Leu	Glu	Tyr	Tyr	His	Tyr
				485					490					495	
Asp	Pro	Glu	Gln	Val	Ile	Asn	Asn	Ile	Leu	Glu	Glu	Arg	Leu	Ala	Pro
			500					505					510		
Thr	Leu	Ser	Gln	Leu	Asp	Arg	Asn	Leu	Asp	Arg	Glu	Met	Lys	Pro	Asp
		515					520					525			
Pro	Thr	Pro	Leu	Leu	Thr	Ser	Arg	His	Asn	Val	Phe	Gln	Asn	Asp	Glu
		530				535					540				
Phe	Asp	Val	Phe	Ser	Arg	Asp	Ser	Val	Asp	Leu	Ser	Arg	Val	His	Lys
		545			550					555					560
Gly	Lys	Ser	Thr	Arg	Lys	Glu	Glu	Asn	Thr	Arg	Ser	Leu	Leu	Asn	Asp
				565					570					575	
Lys	Arg	Ala	Val	Ala	Ala	Gln	Arg	Gln	Arg	Tyr	Glu	Gln	Tyr	Ser	Val
			580					585					590		
Val	Val	Glu	Val	Pro	Leu	Gln	Pro	Gly	Glu	Ser	Leu	Pro	Tyr	His	
		595				600					605				
Ser	Val	Tyr	Tyr	Glu	Asp	Glu	Tyr	Asp	Asp	Thr	Tyr	Asp	Gly	Asn	Gln
		610				615					620				

Val Gly Ala Asn Asp Ala Asp Ser Asp Asp Glu Leu Ile Ser Arg Arg
 625 630 635 640
 Pro Phe Thr Ile Pro Gln Val Leu Arg Thr Lys Val Pro Arg Glu Gly
 645 650 655
 Gln Glu Glu Asp Asp Asp Asp Glu Glu Asp Asp Ala Asp Glu Glu Ala
 660 665 670
 Pro Lys Pro Asp His Phe Val Gln Asp Pro Ala Val Leu Arg Glu Lys
 675 680 685
 Ala Glu Ala Arg Arg Met Ala Phe Leu Ala Lys Lys Gly Tyr Arg His
 690 695 700
 Asp Ser Ser Thr Ala Val Ala Gly Ser Pro Arg Gly His Gly Gln Ser
 705 710 715 720
 Arg Glu Thr Thr Gln Glu Arg Arg Lys Lys Glu Ala Asn Lys Ala Thr
 725 730 735
 Arg Ala Asn His Asn Arg Arg Thr Met Ala Asp Arg Lys Arg Ser Lys
 740 745 750
 Gly Met Ile Pro Ser *
 755 757

<210> 1106
 <211> 69
 <212> PRT
 <213> Homo sapiens

<400> 1106
 Met Asp Pro Glu Thr Cys Pro Cys Pro Ser Gly Gly Ser Cys Thr Cys
 1 5 10 15
 Ala Asp Ser Cys Lys Cys Glu Gly Cys Lys Cys Thr Ser Cys Lys Lys
 20 25 30
 Ser Cys Cys Ser Cys Cys Pro Ala Glu Cys Glu Lys Cys Ala Lys Asp
 35 40 45
 Cys Val Cys Lys Gly Gly Glu Ala Ala Glu Ala Glu Ala Glu Lys Cys
 50 55 60
 Ser Cys Cys Gln *
 65 68

<210> 1107
 <211> 243
 <212> PRT
 <213> Homo sapiens

<400> 1107
 Met Ala Ala Ile Ala Ala Ser Glu Val Leu Val Asp Ser Ala Glu Glu
 1 5 10 15
 Gly Ser Leu Ala Ala Ala Ala Glu Leu Ala Ala Gln Lys Arg Glu Gln
 20 25 30
 Arg Leu Arg Lys Phe Arg Glu Leu His Leu Met Arg Asn Glu Ala Arg
 35 40 45
 Lys Leu Asn His Gln Glu Val Val Glu Glu Asp Lys Arg Leu Lys Leu
 50 55 60
 Pro Ala Asn Trp Glu Ala Lys Lys Ala Arg Leu Glu Trp Glu Leu Lys
 65 70 75 80
 Glu Glu Glu Lys Lys Lys Glu Cys Ala Ala Arg Gly Glu Asp Tyr Glu
 85 90 95
 Lys Val Lys Leu Leu Glu Ile Ser Ala Glu Asp Ala Glu Arg Trp Glu
 100 105 110
 Arg Lys Lys Lys Arg Lys Asn Pro Asp Leu Gly Phe Ser Asp Tyr Ala
 115 120 125

Ala Ala Gln Leu Arg Gln Tyr His Arg Leu Thr Lys Gln Ile Lys Pro
 130 135 140
 Asp Met Glu Thr Tyr Glu Arg Leu Arg Glu Lys His Gly Glu Glu Phe
 145 150 155 160
 Phe Pro Thr Ser Asn Ser Leu Leu His Gly Thr His Val Pro Ser Thr
 165 170 175
 Glu Glu Ile Asp Arg Met Val Ile Asp Leu Glu Lys Gln Ile Glu Lys
 180 185 190
 Arg Asp Lys Tyr Ser Arg Arg Arg Pro Tyr Asn Asp Asp Ala Asp Ile
 195 200 205
 Asp Tyr Ile Asn Glu Arg Asn Ala Lys Phe Asn Lys Lys Ala Glu Arg
 210 215 220
 Phe Tyr Gly Lys Tyr Thr Ala Glu Ile Lys Gln Asn Leu Glu Arg Gly
 225 230 235 240
 Thr Ala Val
 243

<210> 1108
 <211> 202
 <212> PRT
 <213> Homo sapiens

<400> 1108
 Met Ala Ala Ile Ala Ala Ser Glu Val Leu Val Asp Ser Ala Glu Glu
 1 5 10 15
 Gly Ser Leu Ala Ala Ala Glu Leu Ala Ala Gln Lys Arg Glu Gln
 20 25 30
 Arg Leu Arg Lys Phe Arg Glu Leu His Leu Met Arg Glu Cys Ala Ala
 35 40 45
 Arg Gly Glu Asp Tyr Glu Lys Val Lys Leu Leu Glu Ile Ser Ala Glu
 50 55 60
 Asp Ala Glu Arg Trp Glu Arg Lys Lys Lys Arg Lys Asn Pro Asp Leu
 65 70 75 80
 Gly Phe Ser Asp Tyr Ala Ala Ala Gln Leu Arg Gln Tyr His Arg Leu
 85 90 95
 Thr Lys Gln Ile Lys Pro Asp Met Glu Thr Tyr Glu Arg Leu Arg Glu
 100 105 110
 Lys His Gly Glu Glu Phe Phe Pro Thr Ser Asn Ser Leu Leu His Gly
 115 120 125
 Thr His Val Pro Ser Thr Glu Glu Ile Gly Arg Met Val Ile Asp Leu
 130 135 140
 Glu Lys Gln Ile Glu Lys Arg Asp Lys Tyr Ser Arg Arg Arg Pro Tyr
 145 150 155 160
 Asn Asp Asp Ala Asp Ile Asp Tyr Ile Asn Glu Arg Asn Ala Lys Phe
 165 170 175
 Asn Lys Lys Ala Glu Arg Phe Tyr Gly Lys Tyr Thr Ala Glu Ile Lys
 180 185 190
 Gln Asn Leu Glu Arg Gly Thr Ala Val *
 195 200 201

<210> 1109
 <211> 323
 <212> PRT
 <213> Homo sapiens

<400> 1109
 Met Ser Leu Arg Pro Arg Arg Ala Cys Ala Gln Leu Leu Trp His Pro
 1 5 10 15

Ala Ala Gly Met Ala Ser Trp Ala Lys Gly Arg Ser Tyr Leu Ala Pro
 20 25 30
 Gly Leu Leu Gln Gly Gln Val Ala Ile Val Thr Gly Gly Ala Thr Gly
 35 40 45
 Ile Gly Lys Ala Ile Val Lys Glu Leu Leu Glu Leu Gly Ser Asn Val
 50 55 60
 Val Ile Ala Ser Arg Lys Leu Glu Arg Leu Lys Ser Ala Ala Asp Glu
 65 70 75 80
 Leu Gln Ala Asn Leu Pro Pro Thr Lys Gln Ala Arg Val Ile Pro Ile
 85 90 95
 Gln Cys Asn Ile Arg Asn Glu Glu Glu Val Asn Asn Leu Val Lys Ser
 100 105 110
 Thr Leu Asp Thr Phe Gly Lys Ile Asn Phe Leu Val Asn Asn Gly Gly
 115 120 125
 Gly Gln Phe Leu Ser Pro Ala Glu His Ile Ser Ser Lys Gly Trp His
 130 135 140
 Ala Val Leu Glu Thr Asn Leu Thr Gly Thr Phe Tyr Met Cys Lys Ala
 145 150 155 160
 Val Tyr Ser Ser Trp Met Lys Lys His Gly Gly Ser Ile Val Asn Ile
 165 170 175
 Ile Val Pro Thr Lys Ala Gly Phe Pro Leu Ala Val His Ser Gly Ala
 180 185 190
 Ala Arg Ala Gly Val Tyr Asn Leu Thr Lys Ser Leu Ala Leu Glu Trp
 195 200 205
 Ala Cys Ser Gly Ile Arg Ile Asn Cys Val Ala Pro Gly Val Ile Tyr
 210 215 220
 Ser Gln Thr Ala Val Glu Asn Tyr Gly Ser Trp Gly Gln Ser Phe Phe
 225 230 235 240
 Glu Gly Ser Phe Gln Lys Ile Pro Ala Lys Arg Ile Gly Val Pro Glu
 245 250 255
 Glu Val Ser Ser Val Val Cys Phe Leu Leu Ser Pro Ala Ala Ser Phe
 260 265 270
 Ile Thr Gly Gln Ser Val Asp Val Asp Gly Gly Arg Ser Leu Tyr Thr
 275 280 285
 His Ser Tyr Glu Val Pro Asp His Asp Asn Trp Pro Lys Gly Ala Gly
 290 295 300
 Asp Leu Ser Val Val Lys Lys Met Lys Glu Thr Phe Lys Glu Lys Ala
 305 310 315 320
 Lys Leu *
 322

<210> 1110
 <211> 1085
 <212> PRT
 <213> Homo sapiens

<400> 1110
 Met Gly Tyr Met Gly Glu Met Glu Val Gln Gly Pro Thr Arg Glu Ser
 1 5 10 15
 Gly Gln Ser Leu Pro Pro Gln Lys Lys Ala Tyr Leu Ser His Leu Ser
 20 25 30
 Thr Gly Ser Gly His Ile Glu Gly Asp Trp Ala Gly Arg Asn Arg Lys
 35 40 45
 Leu Leu Lys Pro Arg Ser Ile Gln Lys Ser Trp Phe Val Gln Phe Pro
 50 55 60
 Trp Leu Ile Met Asn Glu Glu Gln Thr Ala Leu Phe Cys Ser Ala Cys
 65 70 75 80
 Arg Glu Tyr Pro Ser Ile Arg Asp Lys Arg Ser Arg Leu Ile Glu Gly
 85 90 95
 Tyr Thr Gly Pro Phe Lys Val Glu Thr Leu Lys Tyr His Ala Lys Ser
 100 105 110

Lys Ala His Met Phe Cys Val Asn Ala Leu Ala Ala Arg Asp Pro Ile
 115 120 125
 Trp Ala Ala Arg Phe Arg Ser Ile Arg Asp Pro Pro Gly Asp Val Leu
 130 135 140
 Ala Ser Pro Glu Pro Leu Phe Thr Ala Asp Cys Pro Ile Phe Tyr Pro
 145 150 155 160
 Pro Gly Pro Leu Gly Gly Phe Asp Ser Met Ala Glu Leu Leu Pro Ser
 165 170 175
 Ser Arg Ala Glu Leu Glu Asp Pro Gly Gly Asp Gly Ala Ile Pro Ala
 180 185 190
 Met Tyr Leu Asp Cys Ile Ser Asp Leu Arg Gln Lys Glu Ile Thr Asp
 195 200 205
 Gly Ile His Ser Ser Ser Asp Ile Asn Ile Leu Tyr Asn Asp Ala Val
 210 215 220
 Glu Ser Cys Ile Gln Asp Pro Ser Ala Glu Gly Leu Ser Glu Glu Val
 225 230 235 240
 Pro Val Val Phe Glu Glu Leu Pro Val Val Phe Glu Asp Val Ala Val
 245 250 255
 Tyr Phe Thr Arg Glu Glu Trp Gly Met Leu Asp Lys Arg Gln Lys Glu
 260 265 270
 Leu Tyr Arg Asp Val Met Arg Met Asn Tyr Glu Leu Leu Ala Ser Leu
 275 280 285
 Gly Pro Ala Ala Ala Lys Pro Asp Leu Ile Ser Lys Leu Glu Arg Arg
 290 295 300
 Ala Ala Pro Trp Ile Lys Asp Pro Asn Gly Pro Lys Trp Gly Lys Gly
 305 310 315 320
 Arg Pro Pro Gly Asn Lys Lys Met Val Ala Val Arg Glu Ala Asp Thr
 325 330 335
 Gln Ala Ser Ala Ala Asp Ser Ala Leu Leu Pro Gly Ser Pro Val Glu
 340 345 350
 Ala Arg Ala Ser Cys Cys Ser Ser Ser Ile Cys Glu Glu Gly Asp Gly
 355 360 365
 Pro Arg Arg Ile Lys Arg Thr Tyr Arg Pro Arg Ser Ile Gln Arg Ser
 370 375 380
 Trp Phe Gly Gln Phe Pro Trp Leu Val Ile Asp Pro Lys Glu Thr Lys
 385 390 395 400
 Leu Phe Cys Ser Ala Cys Ile Glu Arg Pro Asn Leu His Asp Lys Ser
 405 410 415
 Ser Arg Leu Val Arg Gly Tyr Thr Gly Pro Phe Lys Val Glu Thr Leu
 420 425 430
 Lys Tyr His Glu Val Ser Lys Ala His Arg Leu Cys Val Asn Thr Val
 435 440 445
 Glu Ile Lys Glu Asp Thr Pro His Thr Ala Leu Val Pro Glu Ile Ser
 450 455 460
 Ser Asp Leu Met Ala Asn Met Glu His Phe Phe Asn Ala Ala Tyr Ser
 465 470 475 480
 Ile Ala Tyr His Ser Arg Pro Leu Asn Asp Phe Glu Lys Ile Leu Gln
 485 490 495
 Leu Leu Gln Ser Thr Gly Thr Val Ile Leu Gly Lys Tyr Arg Asn Arg
 500 505 510
 Thr Ala Cys Thr Gln Phe Ile Lys Tyr Ile Ser Glu Thr Leu Lys Arg
 515 520 525
 Glu Ile Leu Glu Asp Val Arg Asn Ser Pro Cys Val Ser Val Leu Leu
 530 535 540
 Asp Ser Ser Thr Asp Ala Ser Glu Gln Ala Cys Val Gly Ile Tyr Ile
 545 550 555 560
 Arg Tyr Phe Lys Gln Met Glu Val Lys Glu Ser Tyr Ile Thr Leu Ala
 565 570 575
 Pro Leu Tyr Ser Glu Thr Ala Asp Gly Tyr Phe Glu Thr Ile Val Ser
 580 585 590
 Ala Leu Asp Glu Leu Asp Ile Pro Phe Arg Lys Pro Gly Trp Val Val
 595 600 605
 Gly Leu Gly Thr Asp Gly Ser Ala Met Leu Ser Cys Arg Gly Gly Leu
 610 615 620

Val Glu Lys Phe Gln Glu Val Ile Pro Gln Leu Leu Pro Val His Cys
 625 630 635 640
 Val Ala His Arg Leu His Leu Ala Val Val Asp Ala Cys Gly Ser Ile
 645 650 655
 Asp Leu Val Lys Lys Cys Asp Arg His Ile Arg Thr Val Phe Lys Phe
 660 665 670
 Tyr Gln Ser Ser Asn Lys Arg Leu Asn Glu Leu Gln Glu Gly Ala Ala
 675 680 685
 Pro Leu Glu Gln Glu Ile Ile Arg Leu Lys Asp Leu Asn Ala Val Arg
 690 695 700
 Trp Val Ala Ser Arg Arg Arg Thr Leu His Ala Leu Leu Val Ser Trp
 705 710 715 720
 Pro Ala Leu Ala Arg His Leu Gln Arg Val Ala Glu Ala Gly Gly Gln
 725 730 735
 Ile Gly His Arg Ala Lys Gly Met Leu Lys Leu Met Arg Gly Phe His
 740 745 750
 Phe Val Lys Phe Cys His Phe Leu Leu Asp Phe Leu Ser Ile Tyr Arg
 755 760 765
 Pro Leu Ser Glu Val Cys Gln Lys Glu Ile Val Leu Ile Thr Glu Val
 770 775 780
 Asn Ala Thr Leu Gly Arg Ala Tyr Val Ala Leu Glu Ser Leu Arg His
 785 790 795 800
 Gln Ala Gly Pro Lys Glu Glu Glu Phe Asn Ala Ser Phe Lys Asp Gly
 805 810 815
 Arg Leu His Gly Ile Cys Leu Asp Lys Leu Glu Val Ala Glu Gln Arg
 820 825 830
 Phe Gln Ala Asp Arg Glu Arg Thr Val Leu Thr Gly Ile Glu Tyr Leu
 835 840 845
 Gln Gln Arg Phe Asp Ala Asp Arg Pro Pro Gln Leu Lys Asn Met Glu
 850 855 860
 Val Phe Asp Thr Met Ala Trp Pro Ser Gly Ile Glu Leu Ala Ser Phe
 865 870 875 880
 Gly Asn Asp Asp Ile Leu Asn Leu Ala Arg Tyr Phe Glu Cys Ser Leu
 885 890 895
 Pro Thr Gly Tyr Ser Glu Glu Ala Leu Leu Glu Glu Trp Leu Gly Leu
 900 905 910
 Lys Thr Ile Ala Gln His Leu Pro Phe Ser Met Leu Cys Lys Asn Ala
 915 920 925
 Leu Ala Gln His Cys Arg Phe Pro Leu Leu Ser Lys Leu Met Ala Val
 930 935 940
 Val Val Cys Val Pro Ile Ser Thr Ser Cys Cys Glu Arg Gly Phe Lys
 945 950 955 960
 Ala Met Asn Arg Ile Arg Thr Asp Glu Arg Thr Lys Leu Ser Asn Glu
 965 970 975
 Val Leu Asn Met Leu Met Met Thr Ala Val Asn Gly Val Ala Val Thr
 980 985 990
 Glu Tyr Asp Pro Gln Pro Ala Ile Gln His Trp Tyr Leu Thr Ser Ser
 995 1000 1005
 Gly Arg Arg Phe Ser His Val Tyr Thr Cys Ala Gln Val Pro Ala Arg
 1010 1015 1020
 Ser Pro Ala Ser Ala Arg Leu Arg Lys Glu Glu Met Gly Ala Leu Tyr
 1025 1030 1035 1040
 Val Glu Glu Pro Arg Thr Gln Lys Pro Pro Ile Leu Pro Ser Arg Glu
 1045 1050 1055
 Ala Ala Glu Val Leu Lys Asp Cys Ile Met Glu Pro Pro Glu Arg Leu
 1060 1065 1070
 Leu Tyr Pro His Thr Ser Gln Glu Ala Pro Gly Met Ser
 1075 1080 1085

<210> 1111

<211> 354

<212> PRT

<213> Homo sapiens

<400> 1111

```

Met Gly Cys Thr Leu Ser Ala Glu Glu Arg Ala Ala Leu Glu Arg Ser
 1           5           10           15
Lys Ala Ile Glu Lys Asn Leu Lys Glu Asp Gly Ile Ser Ala Ala Lys
      20           25           30
Asp Val Lys Leu Leu Leu Gly Ala Gly Glu Ser Gly Lys Ser Thr
      35           40           45
Ile Val Lys Gln Met Lys Ile Ile His Glu Asp Gly Phe Ser Gly Glu
      50           55           60
Asp Val Lys Gln Tyr Lys Pro Val Val Tyr Ser Asn Thr Ile Gln Ser
      65           70           75           80
Leu Ala Ala Ile Val Arg Ala Met Asp Thr Leu Gly Ile Glu Tyr Gly
      85           90           95
Asp Lys Glu Arg Lys Ala Asp Ala Lys Met Val Cys Asp Val Val Ser
      100          105          110
Arg Met Glu Asp Thr Glu Pro Phe Ser Ala Glu Leu Leu Ser Ala Met
      115          120          125
Met Arg Leu Trp Gly Asp Ser Gly Ile Gln Glu Cys Phe Asn Arg Ser
      130          135          140
Arg Glu Tyr Gln Leu Asn Asp Ser Ala Lys Tyr Tyr Leu Asp Ser Leu
      145          150          155          160
Asp Arg Ile Gly Ala Ala Asp Tyr Gln Pro Thr Glu Gln Asp Ile Leu
      165          170          175
Arg Thr Arg Val Lys Thr Thr Gly Ile Val Glu Thr His Phe Thr Phe
      180          185          190
Lys Asn Leu His Phe Arg Leu Phe Asp Val Gly Gly Gln Arg Ser Glu
      195          200          205
Arg Lys Lys Trp Ile His Cys Phe Glu Asp Val Thr Ala Ile Ile Phe
      210          215          220
Cys Val Ala Leu Ser Gly Tyr Asp Gln Val Leu His Glu Asp Glu Thr
      225          230          235          240
Thr Asn Arg Met His Glu Ser Leu Lys Leu Phe Asp Ser Ile Cys Asn
      245          250          255
Asn Lys Trp Phe Thr Asp Thr Ser Ile Ile Leu Phe Leu Asn Lys Lys
      260          265          270
Asp Ile Phe Glu Glu Lys Ile Lys Lys Ser Pro Leu Thr Ile Cys Phe
      275          280          285
Pro Glu Tyr Thr Gly Pro Ser Ala Phe Thr Glu Ala Val Ala Tyr Ile
      290          295          300
Gln Ala Gln Tyr Glu Ser Lys Asn Lys Ser Ala His Lys Glu Ile Tyr
      305          310          315          320
Thr His Val Thr Cys Ala Thr Asp Thr Asn Asn Ile Gln Phe Val Phe
      325          330          335
Asp Ala Val Thr Asp Val Ile Ile Ala Lys Asn Leu Arg Gly Cys Gly
      340          345          350
Leu Tyr
      354

```

<210> 1112

<211> 318

<212> PRT

<213> Homo sapiens

<400> 1112

```

Glu Ala Arg Thr Ala Arg Glu Leu Thr Asp Gly Val Thr Asp Gly Leu
 1           5           10           15
Thr Met Ala Asp Gln Pro Lys Pro Ile Ser Pro Leu Lys Asn Leu Leu
      20           25           30

```

Ala Gly Gly Phe Gly Gly Val Cys Leu Val Phe Val Gly His Pro Leu
 35 40 45
 Asp Thr Val Lys Val Arg Leu Gln Thr Gln Pro Pro Ser Leu Pro Gly
 50 55 60
 Gln Pro Pro Met Tyr Ser Gly Thr Phe Asp Cys Phe Arg Lys Thr Leu
 65 70 75 80
 Phe Arg Glu Gly Ile Thr Gly Leu Tyr Arg Gly Met Ala Ala Pro Ile
 85 90 95
 Ile Gly Val Thr Pro Met Phe Ala Val Cys Phe Phe Gly Phe Gly Leu
 100 105 110
 Gly Lys Lys Leu Gln Gln Lys His Pro Glu Asp Val Leu Ser Tyr Pro
 115 120 125
 Gln Leu Phe Ala Ala Gly Met Leu Ser Gly Val Phe Thr Thr Gly Ile
 130 135 140
 Met Thr Pro Gly Glu Arg Ile Lys Cys Leu Leu Gln Ile Gln Ala Ser
 145 150 155 160
 Ser Gly Glu Ser Lys Tyr Thr Gly Thr Leu Asp Cys Ala Lys Lys Leu
 165 170 175
 Tyr Gln Glu Phe Gly Ile Arg Gly Ile Tyr Lys Gly Thr Val Leu Thr
 180 185 190
 Leu Met Arg Asp Val Pro Ala Ser Gly Met Tyr Phe Met Thr Tyr Glu
 195 200 205
 Trp Leu Lys Asn Ile Phe Thr Pro Glu Gly Lys Arg Val Ser Glu Leu
 210 215 220
 Ser Ala Pro Arg Ile Leu Val Ala Gly Gly Ile Ala Gly Ile Phe Asn
 225 230 235 240
 Trp Ala Val Ala Ile Pro Pro Asp Val Leu Lys Ser Arg Phe Gln Thr
 245 250 255
 Ala Pro Pro Gly Lys Tyr Pro Asn Gly Phe Arg Asp Val Leu Arg Glu
 260 265 270
 Leu Ile Arg Asp Glu Gly Val Thr Ser Leu Tyr Lys Gly Phe Asn Ala
 275 280 285
 Val Met Ile Arg Ala Phe Pro Ala Asn Ala Ala Cys Phe Leu Gly Phe
 290 295 300
 Glu Val Ala Met Lys Phe Leu Asn Trp Ala Thr Pro Asn Leu
 305 310 315 318

<210> 1113
 <211> 667
 <212> PRT
 <213> Homo sapiens

<400> 1113
 Met Ala Asp Met Glu Asp Leu Phe Gly Ser Asp Ala Asp Ser Glu Ala
 1 5 10 15
 Glu Arg Lys Asp Ser Asp Ser Gly Ser Asp Ser Asp Ser Asp Gln Glu
 20 25 30
 Asn Ala Ala Ser Gly Ser Asn Ala Ser Gly Ser Glu Ser Asp Gln Asp
 35 40 45
 Glu Arg Gly Asp Ser Gly Gln Pro Ser Asn Lys Glu Leu Phe Gly Asp
 50 55 60
 Asp Ser Glu Asp Glu Gly Ala Ser His His Ser Gly Ser Asp Asn His
 65 70 75 80
 Ser Glu Arg Ser Asp Asn Arg Ser Glu Ala Ser Glu Arg Ser Asp His
 85 90 95
 Glu Asp Asn Asp Pro Ser Asp Val Asp Gln His Ser Gly Ser Glu Ala
 100 105 110
 Pro Asn Asp Asp Glu Asp Glu Gly His Arg Ser Asp Gly Gly Ser His
 115 120 125
 His Ser Glu Ala Glu Gly Ser Glu Lys Ala His Ser Asp Asp Glu Lys
 130 135 140

Trp	Gly	Arg	Glu	Asp	Lys	Ser	Asp	Gln	Ser	Asp	Asp	Glu	Lys	Ile	Gln
145					150					155					160
Asn	Ser	Asp	Asp	Glu	Glu	Arg	Ala	Gln	Gly	Ser	Asp	Glu	Asp	Lys	Leu
				165					170						175
Gln	Asn	Ser	Asp	Asp	Asp	Glu	Lys	Met	Gln	Asn	Thr	Asp	Asp	Glu	Glu
				180				185						190	
Arg	Pro	Gln	Leu	Ser	Asp	Asp	Glu	Arg	Gln	Gln	Leu	Ser	Glu	Glu	Glu
		195					200					205			
Lys	Ala	Asn	Ser	Asp	Asp	Glu	Arg	Pro	Val	Ala	Ser	Asp	Asn	Asp	Asp
	210					215					220				
Glu	Lys	Gln	Asn	Ser	Asp	Asp	Glu	Glu	Gln	Pro	Gln	Leu	Ser	Asp	Glu
225					230					235					240
Glu	Lys	Met	Gln	Asn	Ser	Asp	Asp	Glu	Arg	Pro	Gln	Ala	Ser	Asp	Glu
				245					250						255
Glu	His	Arg	His	Ser	Asp	Asp	Glu	Glu	Glu	Gln	Asp	His	Lys	Ser	Glu
			260				265						270		
Ser	Ala	Arg	Gly	Ser	Asp	Ser	Glu	Asp	Glu	Val	Leu	Arg	Met	Lys	Arg
	275						280					285			
Lys	Asn	Ala	Ile	Ala	Ser	Asp	Ser	Glu	Ala	Asp	Ser	Asp	Thr	Glu	Val
	290					295					300				
Pro	Lys	Asp	Asn	Ser	Gly	Thr	Met	Asp	Leu	Phe	Gly	Gly	Ala	Asp	Asp
305					310					315					320
Ile	Ser	Ser	Gly	Ser	Asp	Gly	Glu	Asp	Lys	Pro	Pro	Thr	Pro	Gly	Gln
				325					330						335
Pro	Val	Asp	Glu	Asn	Gly	Leu	Pro	Gln	Asp	Gln	Gln	Glu	Glu	Glu	Pro
			340					345					350		
Ile	Pro	Glu	Thr	Arg	Ile	Glu	Val	Glu	Ile	Pro	Lys	Val	Asn	Thr	Asp
		355					360					365			
Leu	Gly	Asn	Asp	Leu	Tyr	Phe	Val	Lys	Leu	Pro	Asn	Phe	Leu	Ser	Val
	370					375					380				
Glu	Pro	Arg	Pro	Phe	Asp	Pro	Gln	Tyr	Tyr	Glu	Asp	Glu	Phe	Glu	Asp
385					390					395					400
Glu	Glu	Met	Leu	Asp	Glu	Glu	Gly	Arg	Thr	Arg	Leu	Lys	Leu	Lys	Val
				405					410						415
Glu	Asn	Thr	Ile	Arg	Trp	Arg	Ile	Arg	Arg	Asp	Glu	Glu	Gly	Asn	Glu
			420				425						430		
Ile	Lys	Glu	Ser	Asn	Ala	Arg	Ile	Val	Lys	Trp	Ser	Asp	Gly	Ser	Met
		435					440					445			
Ser	Leu	His	Leu	Gly	Asn	Glu	Val	Phe	Asp	Val	Tyr	Lys	Ala	Pro	Leu
	450					455					460				
Gln	Gly	Asp	His	Asn	His	Leu	Phe	Ile	Arg	Gln	Gly	Thr	Gly	Leu	Gln
465					470					475					480
Gly	Gln	Ala	Val	Phe	Lys	Thr	Lys	Leu	Thr	Phe	Arg	Pro	His	Ser	Thr
				485					490					495	
Asp	Ser	Ala	Thr	His	Arg	Lys	Met	Thr	Leu	Ser	Leu	Ala	Asp	Arg	Cys
			500				505						510		
Ser	Lys	Thr	Gln	Lys	Ile	Arg	Ile	Leu	Pro	Met	Ala	Gly	Arg	Asp	Pro
		515					520					525			
Glu	Cys	Gln	Arg	Thr	Glu	Met	Ile	Lys	Lys	Glu	Glu	Arg	Leu	Arg	
	530					535					540				
Ala	Ser	Ile	Arg	Arg	Glu	Ser	Gln	Gln	Arg	Arg	Met	Arg	Glu	Lys	Gln
545					550					555					560
His	Gln	Arg	Gly	Leu	Ser	Ala	Ser	Tyr	Leu	Glu	Pro	Asp	Arg	Tyr	Asp
				565					570					575	
Gln	Glu	Glu	Glu	Gly	Glu	Glu	Ser	Ile	Ser	Leu	Ala	Ala	Ile	Lys	Asn
			580					585					590		
Arg	Tyr	Lys	Gly	Gly	Ile	Arg	Glu	Glu	Arg	Ala	Arg	Ile	Tyr	Ser	Ser
		595					600					605			
Asp	Ser	Asp	Glu	Gly	Ser	Glu	Glu	Asp	Lys	Ala	Gln	Arg	Leu	Leu	Lys
	610					615					620				
Ala	Lys	Lys	Leu	Thr	Ser	Asp	Glu	Glu	Gly	Glu	Pro	Ser	Gly	Lys	Arg
625					630					635					640
Lys	Ala	Glu	Asp	Asp	Asp	Lys	Ala	Asn	Lys	Lys	His	Lys	Lys	Tyr	Val
				645					650						655

Ile Ser Asp Glu Glu Glu Glu Asp Asp Asp *
660 665 666

<210> 1114
<211> 249
<212> PRT
<213> Homo sapiens

<400> 1114
Met Ala Thr Asn Phe Leu Ala His Glu Lys Ile Trp Phe Asp Lys Phe
1 5 10 15
Lys Tyr Asp Asp Ala Glu Arg Arg Phe Tyr Glu Gln Met Asn Gly Pro
20 25 30
Val Ala Gly Ala Ser Arg Gln Glu Asn Gly Ala Ser Val Ile Leu Arg
35 40 45
Asp Ile Ala Arg Ala Arg Glu Asn Ile Gln Lys Ser Leu Ala Gly Ser
50 55 60
Ser Gly Pro Gly Ala Ser Ser Gly Thr Ser Gly Asp His Val Val Gln
65 70 75 80
Glu Leu Gln Gln Ala Ile Ser Lys Leu Glu Ala Arg Leu Asn Val Leu
85 90 95
Glu Lys Ser Ser Pro Gly His Arg Ala Thr Gly Pro Gln Thr Gln His
100 105 110
Val Ser Pro Met Arg Gln Val Glu Pro Pro Ala Lys Lys Pro Ala Thr
115 120 125
Pro Ala Glu Asp Asp Glu Asp Asp Ile Asp Leu Phe Gly Ser Asp
130 135 140
Asn Glu Glu Glu Asp Lys Glu Ala Ala Gln Phe Arg Glu Glu Arg Leu
145 150 155 160
Arg His Tyr Ala Glu Lys Lys Ala Lys Lys Pro Ala Leu Gly Gly Gln
165 170 175
Val Leu His Pro Ala Trp Asn Val Lys Pro Trp Asp Asp Asp Gly
180 185 190
His Gly Pro Ala Gly Gly Leu Cys Ala Leu Tyr Pro Ala Gly Arg Ala
195 200 205
Gly Leu Gly Gly Phe Gln Ala Gly Ala Arg Gly Leu Arg Tyr Pro Glu
210 215 220
Ala Thr Asp Ser Val Cys Gly Gly Gly Arg Gln Gly Gly Asp Arg Leu
225 230 235 240
Ala Gly Gly Gly Asp His Gln Val *
245 248

<210> 1115
<211> 262
<212> PRT
<213> Homo sapiens

<400> 1115
Met Ala Thr Asn Phe Leu Ala His Glu Lys Ile Trp Phe Asp Lys Phe
1 5 10 15
Lys Tyr Asp Asp Ala Glu Arg Arg Phe Tyr Glu Gln Met Asn Gly Pro
20 25 30
Val Arg Gly Ala Ser Arg Gln Glu Asn Gly Ala Ser Val Ile Leu Arg
35 40 45
Asp Ile Ala Arg Ala Arg Glu Asn Ile Gln Lys Ser Leu Ala Gly Ser
50 55 60
Ser Gly Pro Gly Ala Ser Ser Gly Thr Ser Gly Asp His Val Val Gln
65 70 75 80

Glu Leu Gln Gln Ala Ile Ser Lys Leu Glu Ala Arg Leu Asn Val Leu
 85 90 95
 Glu Lys Ser Ser Pro Gly His Arg Ala Thr Ala Pro Gln Thr Gln His
 100 105 110
 Val Ser Pro Met Arg Gln Val Glu Pro Pro Ala Lys Lys Pro Ala Thr
 115 120 125
 Pro Ala Glu Asp Asp Glu Asp Asp Ile Asp Leu Phe Gly Ser Asp
 130 135 140
 Asn Glu Glu Glu Asp Lys Glu Ala Ala Gln Leu Arg Glu Glu Arg Leu
 145 150 155 160
 Arg Gln Tyr Ala Glu Lys Lys Ala Lys Lys Pro Ala Leu Val Ala Lys
 165 170 175
 Ser Ser Ile Leu Leu Asp Val Lys Pro Trp Asp Asp Glu Thr Asp Met
 180 185 190
 Ala Gln Leu Glu Ala Cys Val Arg Ser Ile Gln Leu Asp Gly Leu Val
 195 200 205
 Trp Gly Ala Ser Lys Leu Val Pro Val Gly Tyr Gly Ile Arg Lys Leu
 210 215 220
 Gln Ile Gln Cys Val Val Glu Asp Asp Lys Val Gly Thr Asp Leu Leu
 225 230 235 240
 Glu Glu Glu Ile Thr Lys Phe Glu Glu His Val Gln Ser Val Asp Ile
 245 250 255
 Ala Ala Phe Asn Lys Ile
 260 262

<210> 1116
 <211> 1300
 <212> PRT
 <213> Homo sapiens

<400> 1116
 Met Ala Ala Glu Thr Gln Thr Leu Asn Phe Gly Pro Glu Trp Leu Arg
 1 5 10 15
 Ala Leu Ser Ser Gly Gly Ser Ile Thr Ser Pro Pro Leu Ser Pro Ala
 20 25 30
 Leu Pro Lys Tyr Lys Leu Ala Asp Tyr Arg Tyr Gly Arg Glu Glu Met
 35 40 45
 Leu Ala Leu Phe Leu Lys Asp Asn Lys Ile Pro Ser Asp Leu Leu Asp
 50 55 60
 Lys Glu Phe Leu Pro Ile Leu Gln Glu Glu Pro Leu Pro Pro Leu Ala
 65 70 75 80
 Leu Val Pro Phe Thr Glu Glu Glu Gln Arg Asn Phe Ser Met Ser Val
 85 90 95
 Asn Ser Ala Ala Val Leu Arg Leu Thr Gly Arg Gly Gly Gly Thr
 100 105 110
 Val Val Gly Ala Pro Arg Gly Arg Ser Ser Ser Arg Gly Arg Gly Arg
 115 120 125
 Gly Arg Gly Glu Cys Gly Phe Tyr Gln Arg Ser Phe Asp Glu Val Glu
 130 135 140
 Gly Val Phe Gly Arg Gly Gly Gly Arg Glu Met His Arg Ser Gln Ser
 145 150 155 160
 Trp Glu Glu Arg Gly Asp Arg Arg Phe Glu Lys Pro Gly Arg Lys Asp
 165 170 175
 Val Gly Arg Pro Asn Phe Glu Glu Gly Gly Pro Thr Ser Val Gly Arg
 180 185 190
 Lys His Glu Phe Ile Arg Ser Glu Ser Glu Asn Trp Arg Ile Phe Arg
 195 200 205
 Glu Glu Gln Asn Gly Glu Asp Glu Asp Gly Gly Trp Arg Leu Ala Gly
 210 215 220
 Ser Arg Arg Asp Gly Glu Arg Trp Arg Pro His Ser Pro Asp Gly Pro
 225 230 235 240

Arg Ser Ala Gly Trp Arg Glu His Met Glu Arg Arg Arg Arg Phe Glu
 245 250 255
 Phe Asp Phe Arg Asp Arg Asp Glu Arg Gly Tyr Arg Arg Val Arg
 260 265 270
 Ser Gly Ser Gly Ser Ile Asp Asp Asp Arg Asp Ser Leu Pro Glu Trp
 275 280 285
 Cys Leu Glu Asp Ala Glu Glu Glu Met Gly Thr Phe Asp Ser Ser Gly
 290 295 300
 Ala Phe Leu Ser Leu Lys Lys Val Gln Lys Glu Pro Ile Pro Glu Glu
 305 310 315 320
 Gln Glu Met Asp Phe Arg Pro Val Asp Glu Gly Glu Glu Cys Ser Asp
 325 330 335
 Ser Glu Gly Ser His Asn Glu Glu Ala Lys Glu Pro Asp Lys Thr Asn
 340 345 350
 Lys Lys Glu Gly Glu Lys Thr Asp Arg Val Gly Val Glu Ala Ser Glu
 355 360 365
 Glu Thr Pro Gln Thr Ser Ser Ser Ser Ala Arg Pro Gly Thr Pro Ser
 370 375 380
 Asp His Gln Ser Gln Glu Ala Ser Gln Phe Glu Arg Lys Asp Glu Pro
 385 390 395 400
 Lys Thr Glu Gln Thr Glu Lys Ala Glu Glu Thr Arg Met Glu Asn
 405 410 415
 Ser Leu Pro Ala Lys Val Pro Ser Arg Gly Asp Glu Met Val Ala Asp
 420 425 430
 Val Gln Gln Pro Leu Ser Gln Ile Pro Ser Asp Thr Ala Ser Pro Leu
 435 440 445
 Leu Ile Leu Pro Pro Pro Val Pro Asn Pro Ser Pro Thr Leu Arg Pro
 450 455 460
 Val Glu Thr Pro Val Val Gly Ala Pro Gly Met Gly Ser Val Ser Thr
 465 470 475 480
 Glu Pro Asp Asp Glu Glu Gly Leu Lys His Leu Glu Gln Gln Ala Glu
 485 490 495
 Lys Met Val Ala Tyr Leu Gln Asp Ser Ala Leu Asp Asp Glu Arg Leu
 500 505 510
 Ala Ser Lys Leu Gln Glu His Arg Ala Lys Gly Val Ser Ile Pro Leu
 515 520 525
 Met His Glu Ala Met Gln Lys Trp Tyr Tyr Lys Asp Pro Gln Gly Glu
 530 535 540
 Ile Gln Gly Pro Phe Asn Asn Gln Glu Met Ala Glu Trp Phe Gln Ala
 545 550 555 560
 Gly Tyr Phe Thr Met Ser Leu Leu Val Lys Arg Ala Cys Asp Glu Ser
 565 570 575
 Phe Gln Pro Leu Gly Asp Ile Met Lys Met Trp Gly Arg Val Pro Phe
 580 585 590
 Ser Pro Gly Pro Ala Pro Pro Pro His Met Gly Glu Leu Asp Gln Glu
 595 600 605
 Arg Leu Thr Arg Gln Gln Glu Leu Thr Ala Leu Tyr Gln Met Gln His
 610 615 620
 Leu Gln Tyr Gln Gln Phe Leu Ile Gln Gln Gln Tyr Ala Gln Val Leu
 625 630 635 640
 Ala Gln Gln Gln Lys Ala Ala Leu Ser Ser Gln Gln Gln Gln Gln Leu
 645 650 655
 Ala Leu Leu Leu Gln Gln Phe Gln Thr Leu Lys Met Arg Ile Ser Asp
 660 665 670
 Gln Asn Ile Ile Pro Ser Val Thr Arg Ser Val Ser Val Pro Asp Thr
 675 680 685
 Gly Ser Ile Trp Glu Leu Gln Pro Thr Ala Ser Gln Pro Thr Val Trp
 690 695 700
 Glu Gly Gly Ser Val Trp Asp Leu Pro Leu Asp Thr Thr Thr Pro Gly
 705 710 715 720
 Pro Ala Leu Glu Gln Leu Gln Gln Leu Glu Lys Ala Lys Ala Ala Lys
 725 730 735
 Leu Glu Gln Glu Arg Arg Glu Ala Glu Met Arg Ala Lys Arg Glu Glu
 740 745 750

Glu Glu Arg Lys Arg Gln Glu Glu Leu Arg Arg Gln Gln Glu Glu Ile
 755 760 765
 Leu Arg Arg Gln Gln Glu Glu Glu Arg Lys Arg Arg Glu Glu Glu Glu
 770 775 780
 Leu Ala Arg Arg Lys Gln Glu Glu Ala Leu Arg Arg Gln Arg Glu Gln
 785 790 795 800
 Glu Ile Ala Leu Arg Arg Gln Arg Glu Glu Glu Arg Gln Gln Gln
 805 810 815
 Glu Glu Ala Leu Arg Arg Leu Glu Glu Arg Arg Arg Glu Glu Glu Glu
 820 825 830
 Arg Arg Lys Gln Glu Glu Leu Leu Arg Lys Gln Glu Glu Glu Ala Ala
 835 840 845
 Lys Trp Ala Arg Glu Glu Glu Glu Ala Gln Arg Arg Leu Glu Glu Asn
 850 855 860
 Arg Leu Arg Met Glu Glu Glu Ala Ala Arg Leu Arg His Glu Glu Glu
 865 870 875 880
 Glu Arg Lys Arg Lys Glu Leu Glu Val Gln Arg Gln Lys Glu Leu Met
 885 890 895
 Arg Gln Arg Gln Gln Gln Gln Glu Ala Leu Arg Arg Leu Gln Gln Gln
 900 905 910
 Gln Gln Gln Gln Gln Leu Ala Gln Met Lys Leu Pro Ser Ser Ser Thr
 915 920 925
 Trp Gly Gln Gln Ser Asn Thr Thr Ala Cys Gln Ser Gln Ala Thr Leu
 930 935 940
 Ser Leu Ala Glu Ile Gln Lys Leu Glu Glu Glu Arg Glu Arg Gln Leu
 945 950 955 960
 Arg Glu Glu Gln Arg Arg Gln Gln Arg Glu Leu Met Lys Ala Leu Gln
 965 970 975
 Gln Gln Gln Gln Gln Gln Gln Gln Lys Leu Ser Gly Trp Gly Asn Val
 980 985 990
 Ser Lys Pro Ser Gly Thr Thr Lys Ser Leu Leu Glu Ile Gln Gln Glu
 995 1000 1005
 Glu Ala Arg Gln Met Gln Lys Gln Gln Gln Gln Gln Gln His Gln
 1010 1015 1020
 Gln Pro Asn Arg Ala Arg Asn Asn Thr His Ser Asn Leu His Thr Ser
 1025 1030 1035 1040
 Ile Gly Asn Ser Val Trp Gly Ser Ile Asn Thr Gly Pro Pro Asn Gln
 1045 1050 1055
 Trp Ala Ser Asp Leu Val Ser Ser Ile Trp Ser Asn Ala Asp Thr Lys
 1060 1065 1070
 Asn Ser Asn Met Gly Phe Trp Asp Asp Ala Val Lys Glu Val Gly Pro
 1075 1080 1085
 Arg Asn Ser Thr Asn Lys Asn Lys Asn Asn Ala Ser Leu Ser Lys Ser
 1090 1095 1100
 Val Gly Val Ser Asn Arg Gln Asn Lys Lys Val Glu Glu Glu Glu Lys
 1105 1110 1115 1120
 Leu Leu Lys Leu Phe Gln Gly Val Asn Lys Ala Gln Asp Gly Phe Thr
 1125 1130 1135
 Gln Trp Cys Glu Gln Met Leu His Ala Leu Asn Thr Ala Asn Asn Leu
 1140 1145 1150
 Asp Val Pro Thr Phe Val Ser Phe Leu Lys Glu Val Glu Ser Pro Tyr
 1155 1160 1165
 Glu Val His Asp Tyr Ile Arg Ala Tyr Leu Gly Asp Thr Ser Glu Ala
 1170 1175 1180
 Lys Glu Phe Ala Lys Gln Phe Leu Glu Arg Arg Ala Lys Gln Lys Ala
 1185 1190 1195 1200
 Asn Gln Gln Arg Gln Gln Gln Gln Leu Pro Gln Gln Gln Gln Gln Gln
 1205 1210 1215
 Pro Pro Gln Gln Pro Pro Gln Gln Pro Gln Gln Gln Asp Ser Val Trp
 1220 1225 1230
 Gly Met Asn His Ser Thr Leu His Ser Val Phe Gln Thr Asn Gln Ser
 1235 1240 1245
 Asn Asn Gln Gln Ser Asn Phe Glu Ala Val Gln Ser Gly Lys Lys Lys
 1250 1255 1260

Lys Lys Gln Lys Met Val Arg Ala Asp Pro Ser Leu Leu Gly Phe Ser
 1265 1270 1275 1280
 Val Asn Ala Ser Ser Glu Arg Leu Asn Met Gly Glu Ile Glu Thr Leu
 1285 1290 1295
 Asp Asp Tyr *
 1299

<210> 1117
 <211> 1259
 <212> PRT
 <213> Homo sapiens

<400> 1117
 Met Ala Ala Glu Thr Gln Thr Leu Asn Phe Gly Pro Glu Trp Leu Arg
 1 5 10 15
 Ala Leu Ser Ser Gly Gly Ser Ile Thr Ser Pro Pro Leu Ser Pro Ala
 20 25 30
 Leu Pro Lys Tyr Lys Leu Ala Asp Tyr Arg Tyr Gly Arg Glu Glu Met
 35 40 45
 Leu Ala Leu Phe Leu Lys Asp Asn Lys Ile Pro Ser Asp Leu Leu Asp
 50 55 60
 Lys Glu Phe Leu Pro Ile Leu Gln Glu Glu Pro Leu Pro Pro Leu Ala
 65 70 75 80
 Leu Val Pro Phe Thr Glu Glu Glu Gln Arg Asn Phe Ser Met Ser Val
 85 90 95
 Asn Ser Ala Ala Val Leu Arg Leu Thr Gly Arg Gly Gly Gly Gly Thr
 100 105 110
 Val Val Gly Ala Pro Arg Gly Arg Ser Ser Ser Arg Gly Arg Gly Arg
 115 120 125
 Gly Arg Gly Glu Cys Gly Phe Tyr Gln Arg Ser Phe Asp Glu Val Glu
 130 135 140
 Gly Val Phe Gly Arg Gly Gly Gly Arg Glu Met His Arg Ser Gln Ser
 145 150 155 160
 Trp Glu Glu Arg Gly Asp Arg Arg Phe Glu Lys Pro Gly Arg Lys Asp
 165 170 175
 Val Gly Arg Pro Asn Phe Glu Glu Gly Gly Pro Thr Ser Val Gly Arg
 180 185 190
 Lys His Glu Phe Ile Arg Ser Glu Ser Glu Asn Trp Arg Ile Phe Arg
 195 200 205
 Glu Glu Gln Asn Gly Glu Asp Glu Asp Gly Gly Trp Arg Leu Ala Gly
 210 215 220
 Ser Arg Arg Asp Gly Glu Arg Trp Arg Pro His Ser Pro Asp Gly Pro
 225 230 235 240
 Arg Ser Ala Gly Trp Arg Glu His Met Glu Arg Arg Arg Arg Phe Glu
 245 250 255
 Phe Asp Phe Arg Asp Arg Asp Asp Glu Arg Gly Tyr Arg Arg Val Arg
 260 265 270
 Ser Gly Ser Gly Ser Ile Asp Asp Asp Arg Asp Ser Leu Pro Glu Trp
 275 280 285
 Cys Leu Glu Asp Ala Glu Glu Glu Met Gly Thr Phe Asp Ser Ser Gly
 290 295 300
 Ala Phe Leu Ser Leu Lys Lys Val Gln Lys Glu Pro Ile Pro Glu Glu
 305 310 315 320
 Gln Glu Met Asp Phe Arg Pro Val Asp Glu Gly Glu Glu Cys Ser Asp
 325 330 335
 Ser Glu Gly Ser His Asn Glu Glu Ala Lys Glu Pro Asp Lys Thr Asn
 340 345 350
 Lys Lys Glu Gly Glu Lys Thr Asp Arg Val Gly Val Glu Ala Ser Glu
 355 360 365
 Glu Thr Pro Gln Thr Ser Ser Ser Ser Ala Arg Pro Gly Thr Pro Ser
 370 375 380

Asp	His	Gln	Ser	Gln	Glu	Ala	Ser	Gln	Phe	Glu	Arg	Lys	Asp	Glu	Pro	385	390	395	400
Lys	Thr	Glu	Gln	Thr	Glu	Lys	Ala	Glu	Glu	Glu	Thr	Arg	Met	Glu	Asn	405	410	415	
Ser	Leu	Pro	Ala	Lys	Val	Pro	Ser	Arg	Gly	Asp	Glu	Met	Val	Ala	Asp	420	425	430	
Val	Gln	Gln	Pro	Leu	Ser	Gln	Ile	Pro	Ser	Asp	Thr	Ala	Ser	Pro	Leu	435	440	445	
Leu	Ile	Leu	Pro	Pro	Pro	Val	Pro	Asn	Pro	Ser	Pro	Thr	Leu	Arg	Pro	450	455	460	
Val	Glu	Thr	Pro	Val	Val	Gly	Ala	Pro	Gly	Met	Gly	Ser	Val	Ser	Thr	465	470	475	480
Glu	Pro	Asp	Asp	Glu	Glu	Gly	Leu	Lys	His	Leu	Glu	Gln	Gln	Ala	Glu	485	490	495	
Lys	Met	Val	Ala	Tyr	Leu	Gln	Asp	Ser	Ala	Leu	Asp	Asp	Glu	Arg	Leu	500	505	510	
Ala	Ser	Lys	Leu	Gln	Glu	His	Arg	Ala	Lys	Gly	Val	Ser	Ile	Pro	Leu	515	520	525	
Met	His	Glu	Ala	Met	Gln	Lys	Trp	Tyr	Tyr	Lys	Asp	Pro	Gln	Gly	Glu	530	535	540	
Ile	Gln	Gly	Pro	Phe	Asn	Asn	Gln	Glu	Met	Ala	Glu	Trp	Phe	Gln	Ala	545	550	555	560
Gly	Tyr	Phe	Thr	Met	Ser	Leu	Leu	Val	Lys	Arg	Ala	Cys	Asp	Glu	Ser	565	570	575	
Phe	Gln	Pro	Leu	Gly	Asp	Ile	Met	Lys	Met	Trp	Gly	Arg	Val	Pro	Phe	580	585	590	
Ser	Pro	Gly	Pro	Ala	Pro	Pro	Pro	His	Met	Gly	Glu	Leu	Asp	Gln	Glu	595	600	605	
Arg	Leu	Thr	Arg	Gln	Gln	Glu	Leu	Thr	Ala	Leu	Tyr	Gln	Met	Gln	His	610	615	620	
Leu	Gln	Tyr	Gln	Gln	Phe	Leu	Ile	Gln	Gln	Gln	Tyr	Ala	Gln	Val	Leu	625	630	635	640
Ala	Gln	Gln	Gln	Lys	Ala	Ala	Leu	Ser	Ser	Gln	Gln	Gln	Gln	Gln	Leu	645	650	655	
Ala	Leu	Leu	Leu	Gln	Gln	Phe	Gln	Thr	Leu	Lys	Met	Arg	Ile	Ser	Asp	660	665	670	
Gln	Asn	Ile	Ile	Pro	Ser	Val	Thr	Arg	Ser	Val	Ser	Val	Pro	Asp	Thr	675	680	685	
Gly	Ser	Ile	Trp	Glu	Leu	Gln	Pro	Thr	Ala	Ser	Gln	Pro	Thr	Val	Trp	690	695	700	
Glu	Gly	Gly	Ser	Val	Trp	Asp	Leu	Pro	Leu	Asp	Thr	Thr	Thr	Pro	Gly	705	710	715	720
Pro	Ala	Leu	Glu	Gln	Leu	Gln	Gln	Leu	Glu	Lys	Ala	Lys	Ala	Ala	Lys	725	730	735	
Leu	Glu	Gln	Glu	Arg	Arg	Glu	Ala	Glu	Met	Arg	Ala	Lys	Arg	Glu	Glu	740	745	750	
Glu	Glu	Arg	Lys	Arg	Gln	Glu	Glu	Leu	Arg	Arg	Gln	Gln	Glu	Glu	Ile	755	760	765	
Leu	Arg	Arg	Gln	Gln	Glu	Glu	Glu	Arg	Lys	Arg	Arg	Glu	Glu	Glu	Glu	770	775	780	
Leu	Ala	Arg	Arg	Lys	Gln	Glu	Glu	Ala	Leu	Arg	Arg	Gln	Arg	Glu	Gln	785	790	795	800
Glu	Ile	Ala	Leu	Arg	Gln	Arg	Glu	Glu	Glu	Glu	Arg	Gln	Gln	Gln		805	810	815	
Glu	Glu	Ala	Leu	Arg	Arg	Leu	Glu	Glu	Arg	Arg	Arg	Glu	Glu	Glu	Glu	820	825	830	
Arg	Arg	Lys	Gln	Glu	Glu	Leu	Leu	Arg	Lys	Gln	Glu	Glu	Glu	Ala	Ala	835	840	845	
Lys	Trp	Ala	Arg	Glu	Glu	Glu	Glu	Ala	Gln	Arg	Arg	Leu	Glu	Glu	Asn	850	855	860	
Arg	Leu	Arg	Met	Glu	Glu	Ala	Ala	Arg	Leu	Arg	His	Glu	Glu	Glu		865	870	875	880
Glu	Arg	Lys	Arg	Lys	Glu	Leu	Glu	Val	Gln	Arg	Gln	Lys	Glu	Leu	Met	885	890	895	

Arg Gln Arg Gln Gln Gln Gln Glu Ala Leu Arg Arg Leu Gln Gln Gln
 900 905 910
 Gln Gln Gln Gln Gln Leu Ala Gln Met Lys Gln Arg Arg Gln Gln Arg
 915 920 925
 Glu Leu Met Lys Ala Leu Gln Gln Gln Gln Gln Gln Gln Lys
 930 935 940
 Leu Ser Gly Trp Gly Asn Val Ser Lys Pro Ser Gly Thr Thr Lys Ser
 945 950 955 960
 Leu Leu Glu Ile Gln Gln Glu Glu Ala Arg Gln Met Gln Lys Gln Gln
 965 970 975
 Gln Gln Gln Gln Gln His Gln Gln Pro Asn Arg Ala Arg Asn Asn Thr
 980 985 990
 His Ser Asn Leu His Thr Ser Ile Gly Asn Ser Val Trp Gly Ser Ile
 995 1000 1005
 Asn Thr Gly Pro Pro Asn Gln Trp Ala Ser Asp Leu Val Ser Ser Ile
 1010 1015 1020
 Trp Ser Asn Ala Asp Thr Lys Asn Ser Asn Met Gly Phe Trp Asp Asp
 1025 1030 1035 1040
 Ala Val Lys Glu Val Gly Pro Arg Asn Ser Thr Asn Lys Asn Lys Asn
 1045 1050 1055
 Asn Ala Ser Leu Ser Lys Ser Val Gly Val Ser Asn Arg Gln Asn Lys
 1060 1065 1070
 Lys Val Glu Glu Glu Glu Lys Leu Leu Lys Leu Phe Gln Gly Val Asn
 1075 1080 1085
 Lys Ala Gln Asp Gly Phe Thr Gln Trp Cys Glu Gln Met Leu His Ala
 1090 1095 1100
 Leu Asn Thr Ala Asn Asn Leu Asp Val Pro Thr Phe Val Ser Phe Leu
 1105 1110 1115 1120
 Lys Glu Val Glu Ser Pro Tyr Glu Val His Asp Tyr Ile Arg Ala Tyr
 1125 1130 1135
 Leu Gly Asp Thr Ser Glu Ala Lys Glu Phe Ala Lys Gln Phe Leu Glu
 1140 1145 1150
 Arg Arg Ala Lys Gln Lys Ala Asn Gln Gln Arg Gln Gln Gln Leu
 1155 1160 1165
 Pro Gln Gln Gln Gln Gln Gln Pro Pro Gln Gln Pro Pro Gln Gln Pro
 1170 1175 1180
 Gln Gln Gln Asp Ser Val Trp Gly Met Asn His Ser Thr Leu His Ser
 1185 1190 1195 1200
 Val Phe Gln Thr Asn Gln Ser Asn Asn Gln Gln Ser Asn Phe Glu Ala
 1205 1210 1215
 Val Gln Ser Gly Lys Lys Lys Lys Lys Gln Lys Met Val Arg Ala Asp
 1220 1225 1230
 Pro Ser Leu Leu Gly Phe Ser Val Asn Ala Ser Ser Glu Arg Leu Asn
 1235 1240 1245
 Met Gly Glu Ile Glu Thr Leu Asp Asp Tyr *
 1250 1255 1258

<210> 1118
 <211> 219
 <212> PRT
 <213> Homo sapiens

<400> 1118
 Leu His Pro Ala Ala Thr Ser Thr Ala Trp Leu Arg Val Pro Pro Gly
 1 5 10 15
 Leu Ser Met Ala Leu Ser Trp Val Leu Thr Val Leu Ser Leu Leu Pro
 20 25 30
 Leu Leu Glu Ala Gln Ile Pro Leu Cys Ala Asn Leu Val Pro Val Pro
 35 40 45
 Ile Thr Asn Ala Thr Leu Asp Arg Ile Thr Gly Lys Trp Phe Tyr Ile
 50 55 60

Ala	Ser	Ala	Phe	Arg	Asn	Glu	Glu	Tyr	Asn	Lys	Ser	Val	Gln	Glu	Ile
65					70					75					80
Gln	Ala	Thr	Phe	Phe	Tyr	Phe	Thr	Pro	Asn	Lys	Thr	Glu	Asp	Thr	Ile
			85						90					95	
Phe	Leu	Arg	Glu	Tyr	Gln	Thr	Arg	Gln	Asp	Gln	Cys	Ile	Tyr	Asn	Thr
		100						105					110		
Thr	Tyr	Leu	Asn	Val	Gln	Arg	Glu	Asn	Gly	Thr	Ile	Ser	Arg	Tyr	Val
		115					120					125			
Gly	Gly	Gln	Glu	His	Phe	Ala	His	Leu	Leu	Ile	Leu	Arg	Asp	Thr	Lys
		130				135						140			
Thr	Tyr	Met	Leu	Ala	Phe	Asp	Val	Asn	Asp	Glu	Lys	Asn	Trp	Gly	Leu
145					150					155					160
Ser	Val	Tyr	Ala	Asp	Lys	Pro	Glu	Thr	Thr	Lys	Glu	Gln	Leu	Gly	Glu
				165					170					175	
Phe	Tyr	Glu	Ala	Leu	Asp	Cys	Leu	Arg	Ile	Pro	Lys	Ser	Asp	Val	Val
			180					185					190		
Tyr	Thr	Asp	Trp	Lys	Lys	Asp	Lys	Cys	Glu	Pro	Leu	Glu	Lys	Gln	His
		195				200						205			
Glu	Lys	Glu	Arg	Lys	Gln	Glu	Glu	Gly	Glu	Ser					
	210					215				219					

<210> 1119
 <211> 518
 <212> PRT
 <213> Homo sapiens

<400> 1119

Met	Ala	Ile	Thr	Ala	Thr	Cys	Thr	Arg	Phe	Thr	Asp	Asp	Tyr	Gln	Leu
1				5					10					15	
Phe	Glu	Glu	Leu	Gly	Lys	Gly	Ala	Phe	Ser	Val	Val	Arg	Arg	Ser	Val
			20					25					30		
Lys	Lys	Thr	Ser	Thr	His	Glu	Tyr	Ala	Ala	Lys	Ile	Ile	Asn	Thr	Lys
		35					40					45			
Lys	Leu	Ser	Ala	Arg	Asp	His	Gln	Lys	Leu	Glu	Arg	Glu	Ala	Arg	Ile
	50					55					60				
Cys	Arg	Leu	Leu	Lys	His	Pro	Asn	Ile	Val	Arg	Leu	His	Asp	Ser	Ile
65					70					75					80
Ser	Glu	Glu	Gly	Phe	His	Tyr	Leu	Val	Phe	Asp	Leu	Val	Thr	Gly	Gly
			85						90					95	
Glu	Leu	Phe	Glu	Asp	Ile	Val	Ala	Arg	Glu	Tyr	Tyr	Ser	Glu	Ala	Asp
			100				105						110		
Ala	Ser	His	Cys	Ile	His	Gln	Ile	Leu	Glu	Ser	Val	Asn	His	Ile	His
		115				120						125			
Gln	His	Asp	Ile	Val	His	Arg	Asp	Leu	Lys	Pro	Glu	Asn	Leu	Leu	Leu
	130					135					140				
Ala	Ser	Lys	Cys	Lys	Gly	Ala	Ala	Val	Lys	Leu	Ala	Asp	Phe	Gly	Leu
145					150					155					160
Ala	Ile	Glu	Val	Gln	Gly	Glu	Gln	Gln	Ala	Trp	Phe	Gly	Phe	Ala	Gly
				165					170					175	
Thr	Pro	Gly	Tyr	Leu	Ser	Pro	Glu	Val	Leu	Arg	Lys	Asp	Pro	Tyr	Gly
		180					185						190		
Lys	Pro	Val	Asp	Ile	Trp	Ala	Cys	Gly	Val	Ile	Leu	Tyr	Ile	Leu	Leu
	195					200					205				
Val	Gly	Tyr	Pro	Pro	Phe	Trp	Asp	Glu	Asp	Gln	His	Lys	Leu	Tyr	Gln
	210					215					220				
Gln	Ile	Lys	Ala	Gly	Ala	Tyr	Asp	Phe	Pro	Ser	Pro	Glu	Trp	Asp	Thr
225					230					235					240
Val	Thr	Pro	Glu	Ala	Lys	Asn	Leu	Ile	Asn	Gln	Met	Leu	Thr	Ile	Asn
				245					250					255	
Pro	Ala	Lys	Arg	Ile	Thr	Ala	Asp	Gln	Ala	Leu	Lys	His	Pro	Trp	Val
			260					265						270	

Cys Gln Arg Ser Thr Val Ala Ser Met Met His Arg Gln Glu Thr Val
 275 280 285
 Glu Cys Leu Arg Lys Phe Asn Ala Arg Arg Lys Leu Lys Gly Ala Ile
 290 295 300
 Leu Thr Thr Met Leu Val Ser Arg Asn Phe Ser Ala Ala Lys Ser Leu
 305 310 315 320
 Leu Asn Lys Lys Ser Asp Gly Gly Val Lys Pro Gln Ser Asn Asn Lys
 325 330 335
 Asn Ser Leu Val Ser Pro Ala Gln Glu Pro Ala Pro Leu Gln Thr Ala
 340 345 350
 Met Glu Pro Gln Thr Thr Val Val His Asn Ala Thr Asp Gly Ile Lys
 355 360 365
 Gly Ser Thr Glu Ser Cys Asn Thr Thr Thr Glu Asp Glu Asp Leu Lys
 370 375 380
 Val Arg Lys Gln Glu Ile Ile Lys Ile Thr Glu Gln Leu Ile Glu Ala
 385 390 395 400
 Ile Asn Asn Gly Asp Phe Glu Ala Tyr Thr Lys Ile Cys Asp Pro Gly
 405 410 415
 Leu Thr Ser Phe Glu Pro Glu Ala Leu Gly Asn Leu Val Glu Gly Met
 420 425 430
 Asp Phe His Lys Phe Tyr Phe Glu Asn Leu Leu Ser Lys Asn Ser Lys
 435 440 445
 Pro Ile His Thr Thr Ile Leu Asn Pro His Val His Val Ile Gly Glu
 450 455 460
 Asp Ala Ala Cys Ile Ala Tyr Ile Arg Leu Thr Gln Tyr Ile Asp Gly
 465 470 475 480
 Gln Gly Arg Pro Arg Thr Ser Gln Ser Glu Glu Thr Arg Val Trp His
 485 490 495
 Arg Arg Asp Gly Lys Trp Leu Asn Val His Tyr His Cys Ser Gly Ala
 500 505 510
 Pro Ala Ala Pro Leu Gln
 515 518

<210> 1120
 <211> 326
 <212> PRT
 <213> Homo sapiens

<400> 1120
 Met Leu Cys Leu Ile Gly Leu Leu Thr Ile Gly Leu Glu Arg Pro Pro
 1 5 10 15
 Gly Gln Val Ile Cys Pro Glu Arg Val Gln Leu Ser Gln Pro Gln Asn
 20 25 30
 Trp Asn Phe Ser Gly Ala Gly Gly Ala Trp Ser Leu Asp Phe Ala Glu
 35 40 45
 Gln Leu Lys Trp Ser Ala Glu Leu Ala Arg Leu Gly Glu Ser Ile Met
 50 55 60
 Asp Gly Lys Gln Gly Gly Met Asp Gly Ser Lys Pro Ala Gly Pro Arg
 65 70 75 80
 Asp Phe Pro Gly Ile Arg Leu Leu Ser Asn Pro Leu Met Gly Asp Ala
 85 90 95
 Val Ser Asp Trp Ser Pro Met His Glu Ala Ala Ile His Gly His Gln
 100 105 110
 Leu Ser Leu Arg Asn Leu Ile Ser Gln Gly Trp Ala Val Asn Ile Ile
 115 120 125
 Thr Ala Asp His Val Ser Pro Leu His Glu Ala Cys Leu Gly Gly His
 130 135 140
 Leu Ser Cys Val Lys Ile Leu Leu Lys His Gly Ala Gln Val Asn Gly
 145 150 155 160
 Val Thr Ala Asp Trp His Thr Pro Leu Phe Asn Ala Cys Val Ser Gly
 165 170 175

```

Ser Trp Asp Cys Val Asn Leu Leu Leu Gln His Gly Ala Ser Val Gln
    180                      185                      190
Pro Glu Ser Asp Leu Ala Ser Pro Ile His Glu Ala Ala Arg Arg Gly
    195                      200                      205
His Val Glu Cys Val Asn Ser Leu Ile Ala Tyr Gly Gly Asn Ile Asp
    210                      215                      220
His Lys Ile Ser His Leu Gly Thr Pro Leu Tyr Leu Ala Cys Glu Asn
    225                      230                      235                      240
Gln Gln Arg Ala Cys Val Lys Lys Leu Leu Glu Ser Gly Ala Asp Val
    245                      250                      255
Asn Gln Gly Lys Gly Gln Asp Ser Pro Leu His Ala Val Ala Arg Thr
    260                      265                      270
Ala Ser Glu Glu Leu Ala Cys Leu Leu Met Asp Phe Gly Ala Asp Thr
    275                      280                      285
Gln Ala Lys Asn Ala Glu Gly Lys Arg Pro Val Glu Leu Val Pro Pro
    290                      295                      300
Glu Ser Pro Leu Ala Gln Leu Phe Leu Glu Arg Glu Gly Ala Ser Leu
    305                      310                      315                      320
Pro Lys Pro Lys Pro *
    325

```

```

<210> 1121
<211> 120
<212> PRT
<213> Homo sapiens

```

```

<400> 1121
Asp Met Ala Gly Leu Met Thr Ile Val Thr Ser Leu Leu Phe Leu Gly
  1          5          10          15
Val Cys Ala His Ile Ile Pro Thr Gly Ser Val Val Leu Pro Ser
    20          25          30
Pro Cys Cys Met Phe Phe Val Ser Lys Arg Ile Pro Glu Asn Arg Val
    35          40          45
Val Ser Tyr Gln Leu Ser Ser Arg Ser Thr Cys Leu Lys Ala Gly Val
    50          55          60
Ile Phe Thr Thr Lys Lys Gly Gln Gln Phe Cys Gly Asp Pro Lys Gln
    65          70          75          80
Glu Trp Val Gln Arg Tyr Met Lys Asn Leu Asp Ala Lys Gln Lys Lys
    85          90          95
Ala Ser Pro Arg Ala Arg Ala Val Ala Val Lys Gly Pro Val Gln Arg
    100          105          110
Tyr Pro Gly Asn Gln Thr Thr Cys
    115          120

```

```

<210> 1122
<211> 1338
<212> PRT
<213> Homo sapiens

```

```

<400> 1122
Met Glu Ala Gly Gly Gly Gly Ala Leu Pro Ala Gly Val Glu Thr
  1          5          10          15
Met Val Leu Thr Leu Gly Glu Ser Trp Pro Val Leu Val Gly Arg Arg
    20          25          30
Phe Leu Ser Leu Ser Ala Ala Asp Gly Ser Asp Gly Ser His Asp Ser
    35          40          45
Trp Asp Val Glu Arg Val Ala Glu Trp Pro Trp Leu Ser Gly Thr Ile
    50          55          60

```

Arg	Ala	Val	Ser	His	Thr	Asp	Val	Thr	Lys	Lys	Asp	Leu	Lys	Val	Cys	65	70	75	80
Val	Glu	Phe	Asp	Gly	Glu	Ser	Trp	Arg	Lys	Arg	Arg	Trp	Ile	Glu	Val	85	90	95	
Tyr	Ser	Leu	Leu	Arg	Arg	Ala	Phe	Leu	Val	Glu	His	Asn	Leu	Val	Leu	100	105	110	
Ala	Glu	Arg	Lys	Ser	Pro	Glu	Ile	Ser	Glu	Arg	Ile	Val	Gln	Trp	Pro	115	120	125	
Ala	Ile	Thr	Tyr	Lys	Pro	Leu	Leu	Asp	Lys	Ala	Gly	Leu	Gly	Ser	Ile	130	135	140	
Thr	Ser	Val	Arg	Phe	Leu	Gly	Asp	Gln	Gln	Arg	Val	Phe	Leu	Ser	Lys	145	150	155	160
Asp	Leu	Leu	Lys	Pro	Ile	Gln	Asp	Val	Asn	Ser	Leu	Arg	Leu	Ser	Leu	165	170	175	
Thr	Asp	Asn	Gln	Ile	Val	Ser	Lys	Glu	Phe	Gln	Ala	Leu	Ile	Val	Lys	180	185	190	
His	Leu	Asp	Glu	Ser	His	Leu	Leu	Lys	Gly	Asp	Lys	Asn	Leu	Val	Gly	195	200	205	
Ser	Glu	Val	Lys	Ile	Tyr	Ser	Leu	Asp	Pro	Ser	Thr	Gln	Trp	Phe	Ser	210	215	220	
Ala	Thr	Val	Val	Asn	Gly	Asn	Pro	Ala	Ser	Lys	Thr	Leu	Gln	Val	Asn	225	230	235	240
Cys	Glu	Glu	Ile	Pro	Ala	Leu	Lys	Ile	Val	Asp	Pro	Ser	Leu	Ile	His	245	250	255	
Val	Glu	Val	Val	His	Asp	Asn	Leu	Val	Thr	Cys	Gly	Asn	Ser	Ala	Arg	260	265	270	
Ile	Gly	Ala	Val	Lys	Arg	Lys	Ser	Ser	Glu	Asn	Asn	Gly	Thr	Leu	Val	275	280	285	
Ser	Lys	Gln	Ala	Lys	Ser	Cys	Ser	Glu	Ala	Ser	Pro	Ser	Met	Cys	Pro	290	295	300	
Val	Gln	Ser	Val	Pro	Thr	Thr	Val	Phe	Lys	Glu	Ile	Leu	Leu	Gly	Cys	305	310	315	320
Thr	Ala	Ala	Thr	Pro	Ser	Lys	Asp	Pro	Arg	Gln	Gln	Ser	Thr	Pro		325	330	335	
Gln	Ala	Ala	Asn	Ser	Pro	Pro	Asn	Leu	Gly	Ala	Lys	Ile	Pro	Gln	Gly	340	345	350	
Cys	His	Lys	Gln	Ser	Leu	Pro	Glu	Glu	Ile	Ser	Ser	Cys	Leu	Asn	Thr	355	360	365	
Lys	Ser	Glu	Ala	Leu	Arg	Thr	Lys	Pro	Asp	Val	Cys	Lys	Ala	Gly	Leu	370	375	380	
Leu	Ser	Lys	Ser	Ser	Gln	Ile	Gly	Thr	Gly	Asp	Leu	Lys	Ile	Leu	Thr	385	390	395	400
Glu	Pro	Lys	Gly	Ser	Cys	Thr	Gln	Pro	Lys	Thr	Asn	Thr	Asp	Gln	Glu	405	410	415	
Asn	Arg	Leu	Glu	Ser	Val	Pro	Gln	Ala	Leu	Thr	Gly	Leu	Pro	Lys	Glu	420	425	430	
Cys	Leu	Pro	Thr	Lys	Ala	Ser	Ser	Lys	Ala	Glu	Leu	Glu	Ile	Ala	Asn	435	440	445	
Pro	Pro	Glu	Leu	Gln	Lys	His	Leu	Glu	His	Ala	Pro	Ser	Pro	Ser	Asp	450	455	460	
Val	Ser	Asn	Ala	Pro	Glu	Val	Lys	Ala	Gly	Val	Asn	Ser	Asp	Ser	Pro	465	470	475	480
Asn	Asn	Cys	Ser	Gly	Lys	Lys	Val	Glu	Pro	Ser	Ala	Leu	Ala	Cys	Arg	485	490	495	
Ser	Gln	Asn	Leu	Lys	Glu	Ser	Ser	Val	Lys	Val	Asp	Asn	Glu	Ser	Cys	500	505	510	
Cys	Ser	Arg	Ser	Asn	Asn	Lys	Ile	Gln	Asn	Ala	Pro	Ser	Arg	Lys	Ser	515	520	525	
Val	Leu	Thr	Asp	Pro	Ala	Lys	Leu	Lys	Lys	Leu	Gln	Ser	Gly	Glu		530	535	540	
Ala	Phe	Val	Gln	Asp	Asp	Ser	Cys	Val	Asn	Ile	Val	Ala	Gln	Leu	Pro	545	550	555	560
Lys	Cys	Arg	Glu	Cys	Arg	Leu	Asp	Ser	Leu	Arg	Lys	Asp	Lys	Glu	Gln	565	570	575	

Gln Lys Asp Ser Pro Val Phe Cys Arg Phe Phe His Phe Arg Arg Leu
 580 585 590
 Gln Phe Asn Lys His Gly Val Leu Arg Val Glu Gly Phe Leu Thr Pro
 595 600 605
 Asn Lys Tyr Asp Asn Glu Ala Ile Gly Leu Trp Leu Pro Leu Thr Lys
 610 615 620
 Asn Val Val Gly Ile Asp Leu Asp Thr Ala Lys Tyr Ile Leu Ala Asn
 625 630 635 640
 Ile Gly Asp His Phe Cys Gln Met Val Ile Ser Glu Lys Glu Ala Met
 645 650 655
 Ser Thr Ile Glu Pro His Arg Gln Val Ala Trp Lys Arg Ala Val Lys
 660 665 670
 Gly Val Arg Glu Met Cys Asp Val Cys Asp Thr Thr Ile Phe Asn Leu
 675 680 685
 His Trp Val Cys Pro Arg Cys Gly Phe Gly Val Cys Val Asp Cys Tyr
 690 695 700
 Arg Met Lys Arg Lys Asn Cys Gln Gln Gly Ala Ala Tyr Lys Thr Phe
 705 710 715 720
 Ser Trp Leu Lys Cys Val Lys Ser Gln Ile His Glu Pro Glu Asn Leu
 725 730 735
 Met Pro Thr Gln Ile Ile Pro Gly Lys Ala Leu Tyr Asp Val Gly Asp
 740 745 750
 Ile Val His Ser Val Arg Ala Lys Trp Gly Ile Lys Ala Asn Cys Pro
 755 760 765
 Cys Ser Asn Arg Gln Phe Lys Leu Phe Ser Lys Pro Ala Ser Lys Glu
 770 775 780
 Asp Leu Lys Gln Thr Ser Leu Ala Gly Glu Lys Pro Thr Leu Gly Ala
 785 790 795 800
 Val Leu Gln Gln Asn Pro Ser Val Leu Glu Pro Ala Ala Val Gly Gly
 805 810 815
 Glu Ala Ala Ser Lys Pro Ala Gly Ser Met Lys Pro Ala Cys Pro Ala
 820 825 830
 Ser Thr Ser Pro Leu Asn Trp Leu Ala Asp Leu Thr Ser Gly Asn Val
 835 840 845
 Asn Lys Glu Asn Lys Glu Lys Gln Pro Thr Met Pro Ile Leu Lys Asn
 850 855 860
 Glu Ile Lys Cys Leu Pro Pro Leu Pro Pro Leu Ser Lys Ser Ser Thr
 865 870 875 880
 Val Leu His Thr Phe Asn Ser Thr Ile Leu Thr Pro Val Ser Asn Asn
 885 890 895
 Asn Ser Gly Phe Leu Arg Asn Leu Leu Asn Ser Ser Thr Gly Lys Thr
 900 905 910
 Glu Asn Gly Leu Lys Asn Thr Pro Lys Ile Leu Asp Asp Ile Phe Ala
 915 920 925
 Ser Leu Val Gln Asn Lys Thr Thr Ser Asp Leu Ser Lys Arg Pro Gln
 930 935 940
 Gly Leu Thr Ile Lys Pro Ser Ile Leu Gly Phe Asp Thr Pro His Tyr
 945 950 955 960
 Trp Leu Cys Asp Asn Arg Leu Leu Cys Leu Gln Asp Pro Asn Asn Lys
 965 970 975
 Ser Asn Trp Asn Val Phe Arg Glu Cys Trp Lys Gln Gly Gln Pro Val
 980 985 990
 Met Val Ser Gly Val His His Lys Leu Asn Ser Glu Leu Trp Lys Pro
 995 1000 1005
 Glu Ser Phe Arg Lys Glu Phe Gly Glu Gln Glu Val Asp Leu Val Asn
 1010 1015 1020
 Cys Arg Thr Asn Glu Ile Ile Thr Gly Ala Thr Val Gly Asp Phe Trp
 1025 1030 1035 1040
 Asp Gly Phe Glu Asp Val Pro Asn Arg Leu Lys Asn Glu Lys Glu Pro
 1045 1050 1055
 Met Val Leu Lys Leu Lys Asp Trp Pro Pro Gly Glu Asp Phe Arg Asp
 1060 1065 1070
 Met Met Pro Ser Arg Phe Asp Asp Leu Met Ala Asn Ile Pro Leu Pro
 1075 1080 1085

Glu Tyr Thr Arg Arg Asp Gly Lys Leu Asn Leu Ala Ser Arg Leu Pro
 1090 1095 1100
 Asn Tyr Phe Val Arg Pro Asp Leu Gly Pro Lys Met Tyr Asn Ala Tyr
 1105 1110 1115 1120
 Gly Leu Ile Thr Pro Glu Asp Arg Lys Tyr Gly Thr Thr Asn Leu His
 1125 1130 1135
 Leu Asp Val Ser Asp Ala Ala Asn Val Met Val Tyr Val Gly Ile Pro
 1140 1145 1150
 Lys Gly Gln Cys Glu Gln Glu Glu Val Leu Lys Thr Ile Gln Asp
 1155 1160 1165
 Gly Asp Ser Asp Glu Leu Thr Ile Lys Arg Phe Ile Glu Gly Lys Glu
 1170 1175 1180
 Lys Pro Gly Ala Leu Trp His Ile Tyr Ala Ala Lys Asp Thr Glu Lys
 1185 1190 1195 1200
 Ile Arg Glu Phe Leu Lys Lys Val Ser Glu Glu Gln Gly Gln Glu Asn
 1205 1210 1215
 Pro Ala Asp His Asp Pro Ile His Asp Gln Ser Trp Tyr Leu Asp Arg
 1220 1225 1230
 Ser Leu Arg Lys Arg Leu His Gln Glu Tyr Gly Val Gln Gly Trp Ala
 1235 1240 1245
 Ile Val Gln Phe Leu Gly Asp Val Val Phe Ile Pro Ala Gly Ala Pro
 1250 1255 1260
 His Gln Val His Asn Leu Tyr Ser Cys Ile Lys Val Ala Glu Asp Phe
 1265 1270 1275 1280
 Val Ser Pro Glu His Val Lys His Cys Phe Trp Leu Thr Gln Glu Phe
 1285 1290 1295
 Arg Tyr Leu Ser Gln Thr His Thr Asn His Glu Asp Lys Leu Gln Val
 1300 1305 1310
 Lys Asn Val Ile Tyr His Ala Val Lys Asp Ala Val Ala Met Leu Lys
 1315 1320 1325
 Ala Ser Glu Ser Ser Phe Gly Lys Pro *
 1330 1335 1337

<210> 1123
 <211> 568
 <212> PRT
 <213> Homo sapiens

<400> 1123
 Met Pro Ser Thr Asp Leu Leu Met Leu Lys Ala Phe Glu Pro Tyr Leu
 1 5 10 15
 Glu Ile Leu Glu Val Tyr Ser Thr Lys Ala Lys Asn Tyr Val Asn Gly
 20 25 30
 His Cys Thr Lys Tyr Glu Pro Trp Gln Leu Ile Ala Trp Ser Val Val
 35 40 45
 Trp Thr Leu Leu Ile Val Trp Gly Tyr Glu Phe Val Phe Gln Pro Glu
 50 55 60
 Ser Leu Trp Ser Arg Phe Lys Lys Lys Cys Phe Lys Leu Thr Arg Lys
 65 70 75 80
 Met Pro Ile Ile Gly Arg Lys Ile Gln Asp Lys Leu Asn Lys Thr Lys
 85 90 95
 Asp Asp Ile Ser Lys Asn Met Ser Phe Leu Lys Val Asp Lys Glu Tyr
 100 105 110
 Val Lys Ala Leu Pro Ser Gln Gly Leu Ser Ser Ser Ala Val Leu Glu
 115 120 125
 Lys Leu Lys Glu Tyr Ser Ser Met Asp Ala Phe Trp Gln Glu Gly Arg
 130 135 140
 Ala Ser Gly Thr Val Tyr Ser Gly Glu Glu Lys Leu Thr Glu Leu Leu
 145 150 155 160
 Val Lys Ala Tyr Gly Asp Phe Ala Trp Ser Asn Pro Leu His Pro Asp
 165 170 175


```

Ile Phe Pro Gly Leu Arg Lys Ile Glu Ala Glu Ile Val Arg Ile Ala
      180                      185                      190
Cys Ser Leu Phe Asn Gly Gly Pro Asp Ser Cys Gly Cys Val Thr Ser
      195                      200                      205
Gly Gly Thr Glu Ser Ile Leu Met Ala Cys Lys Ala Tyr Arg Asp Leu
      210                      215                      220
Ala Phe Glu Lys Gly Ile Lys Thr Pro Glu Ile Val Ala Pro Gln Ser
      225                      230                      235                      240
Ala His Ala Ala Phe Asn Lys Ala Ala Ser Tyr Phe Gly Met Lys Ile
      245                      250                      255
Val Arg Val Pro Leu Thr Lys Met Met Glu Val Asp Val Arg Ala Met
      260                      265                      270
Arg Arg Ala Ile Ser Arg Asn Thr Ala Met Leu Val Cys Ser Thr Pro
      275                      280                      285
Gln Phe Pro His Gly Val Ile Asp Pro Val Pro Glu Val Ala Lys Leu
      290                      295                      300
Ala Val Lys Tyr Lys Ile Pro Leu His Val Asp Ala Cys Leu Gly Gly
      305                      310                      315                      320
Phe Leu Ile Val Phe Met Glu Lys Ala Gly Tyr Pro Leu Glu His Pro
      325                      330                      335
Phe Asp Phe Arg Val Lys Gly Val Thr Ser Ile Ser Ala Asp Thr His
      340                      345                      350
Lys Tyr Gly Tyr Ala Pro Lys Gly Ser Ser Leu Val Leu Tyr Ser Asp
      355                      360                      365
Lys Lys Tyr Arg Asn Tyr Gln Phe Phe Val Asp Thr Asp Trp Gln Gly
      370                      375                      380
Gly Ile Tyr Ala Ser Pro Thr Ile Ala Gly Ser Arg Pro Gly Gly Ile
      385                      390                      395                      400
Ser Ala Ala Cys Trp Ala Ala Leu Met His Phe Gly Glu Asn Gly Tyr
      405                      410                      415
Val Glu Ala Thr Lys Gln Ile Ile Lys Thr Ala Arg Phe Leu Lys Ser
      420                      425                      430
Glu Leu Glu Asn Ile Lys Gly Ile Phe Val Phe Gly Asn Pro Gln Leu
      435                      440                      445
Ser Val Ile Ala Leu Gly Ser Arg Asp Phe Asp Ile Tyr Arg Leu Ser
      450                      455                      460
Asn Leu Met Thr Ala Lys Gly Trp Asn Leu Asn Gln Leu Gln Phe Pro
      465                      470                      475                      480
Pro Ser Ile His Phe Cys Ile Thr Leu Leu His Ala Arg Lys Arg Val
      485                      490                      495
Ala Ile Gln Phe Leu Lys Asp Ile Arg Glu Ser Val Thr Gln Ile Met
      500                      505                      510
Lys Asn Pro Lys Ala Lys Thr Thr Gly Met Gly Ala Ile Tyr Gly Met
      515                      520                      525
Ala Gln Thr Thr Val Asp Arg Asn Met Val Ala Glu Leu Ser Ser Val
      530                      535                      540
Phe Leu Asp Ser Leu Tyr Ser Thr Asp Thr Val Thr Gln Gly Ser Gln
      545                      550                      555                      560
Met Asn Gly Ser Pro Lys Pro His
      565                      568

```

<210> 1124

<211> 931

<212> PRT

<213> Homo sapiens

<400> 1124

```

Met Lys Ile Gln Lys Lys Leu Thr Gly Cys Ser Arg Leu Met Leu Leu
  1                      5                      10                      15
Cys Leu Ser Leu Glu Leu Leu Leu Glu Ala Gly Ala Gly Asn Ile His
      20                      25                      30

```

Tyr Ser Val Pro Glu Glu Thr Asp Lys Gly Ser Phe Val Gly Asn Ile
 35 40 45
 Ala Lys Asp Leu Gly Leu Gln Pro Gln Glu Leu Ala Asp Gly Gly Val
 50 55 60
 Arg Ile Val Ser Arg Gly Arg Met Pro Leu Phe Ala Leu Asn Pro Arg
 65 70 75 80
 Ser Gly Ser Leu Ile Thr Ala Arg Arg Ile Asp Arg Glu Glu Leu Cys
 85 90 95
 Ala Gln Ser Met Pro Cys Leu Val Ser Phe Asn Ile Leu Val Glu Asp
 100 105 110
 Lys Met Lys Leu Phe Pro Val Glu Val Glu Ile Ile Asp Ile Asn Asp
 115 120 125
 Asn Thr Pro Gln Phe Gln Leu Glu Glu Leu Glu Phe Lys Met Asn Glu
 130 135 140
 Ile Thr Thr Pro Gly Thr Arg Val Ser Leu Pro Phe Gly Gln Asp Leu
 145 150 155 160
 Asp Val Gly Met Asn Ser Leu Gln Ser Tyr Gln Leu Ser Ser Asn Pro
 165 170 175
 His Phe Ser Leu Asp Val Gln Gln Gly Ala Asp Gly Pro Gln His Pro
 180 185 190
 Glu Met Val Leu Gln Ser Pro Leu Asp Arg Glu Glu Glu Ala Val His
 195 200 205
 His Leu Ile Leu Thr Ala Ser Asp Gly Gly Glu Pro Val Arg Ser Gly
 210 215 220
 Thr Leu Arg Ile Tyr Ile Gln Val Val Asp Ala Asn Asp Asn Pro Pro
 225 230 235 240
 Ala Phe Thr Gln Ala Gln Tyr His Ile Asn Val Pro Glu Asn Val Pro
 245 250 255
 Leu Gly Thr Gln Leu Leu Met Val Asn Ala Thr Asp Pro Asp Glu Gly
 260 265 270
 Ala Asn Gly Glu Val Thr Tyr Ser Phe His Asn Val Asp His Arg Val
 275 280 285
 Ala Gln Ile Phe Arg Leu Asp Ser Tyr Thr Gly Glu Ile Ser Asn Lys
 290 295 300
 Glu Pro Leu Asp Phe Glu Glu Tyr Lys Met Tyr Ser Met Glu Val Gln
 305 310 315 320
 Ala Gln Asp Gly Ala Gly Leu Met Ala Lys Val Lys Val Leu Ile Lys
 325 330 335
 Val Leu Asp Val Asn Asp Asn Ala Pro Glu Val Thr Ile Thr Ser Val
 340 345 350
 Thr Thr Ala Val Pro Glu Asn Phe Pro Pro Gly Thr Ile Ile Ala Leu
 355 360 365
 Ile Ser Val His Asp Gln Asp Ser Gly Asp Asn Gly Tyr Thr Thr Cys
 370 375 380
 Phe Ile Pro Gly Asn Leu Pro Phe Lys Leu Glu Lys Leu Val Asp Asn
 385 390 395 400
 Tyr Tyr Arg Leu Val Thr Glu Arg Thr Leu Asp Arg Glu Leu Ile Ser
 405 410 415
 Gly Tyr Asn Ile Thr Ile Thr Ala Ile Asp Gln Gly Thr Pro Ala Leu
 420 425 430
 Ser Thr Glu Thr His Ile Ser Leu Leu Val Thr Asp Ile Asn Asp Asn
 435 440 445
 Ser Pro Val Phe His Gln Asp Ser Tyr Ser Ala Tyr Ile Pro Glu Asn
 450 455 460
 Asn Pro Arg Gly Ala Ser Ile Phe Ser Val Arg Ala His Asp Leu Asp
 465 470 475 480
 Ser Asn Glu Asn Ala Gln Ile Thr Tyr Ser Leu Ile Glu Asp Thr Ile
 485 490 495
 Gln Gly Ala Pro Leu Ser Ala Tyr Leu Ser Ile Asn Ser Asp Thr Gly
 500 505 510
 Val Leu Tyr Ala Leu Arg Ser Phe Asp Tyr Glu Gln Phe Arg Asp Met
 515 520 525
 Gln Leu Lys Val Met Ala Arg Asp Ser Gly Asp Pro Pro Leu Ser Ser
 530 535 540

Asn Val Ser Leu Ser Leu Phe Leu Leu Asp Gln Asn Asp Asn Ala Pro
 545 550 555 560
 Glu Ile Leu Tyr Pro Ala Leu Pro Thr Asp Gly Ser Thr Gly Val Glu
 565 570 575
 Leu Ala Pro Leu Ser Ala Glu Pro Gly Tyr Leu Val Thr Lys Val Val
 580 585 590
 Ala Val Asp Arg Asp Ser Gly Gln Asn Ala Trp Leu Ser Tyr Arg Leu
 595 600 605
 Leu Lys Ala Ser Glu Pro Gly Leu Phe Ser Val Gly Leu His Thr Gly
 610 615 620
 Glu Val Arg Thr Ala Arg Ala Leu Leu Asp Arg Asp Ala Leu Lys Gln
 625 630 635 640
 Ser Leu Val Val Ala Val Gln Asp His Gly Gln Pro Pro Leu Ser Ala
 645 650 655
 Thr Val Thr Leu Thr Val Ala Val Ala Asp Arg Ile Ser Asp Ile Leu
 660 665 670
 Ala Asp Leu Gly Ser Leu Glu Pro Ser Ala Lys Pro Asn Asp Ser Asp
 675 680 685
 Leu Thr Leu Tyr Leu Val Val Ala Ala Ala Val Ser Cys Val Phe
 690 695 700
 Leu Ala Phe Val Ile Val Leu Leu Ala His Arg Leu Arg Arg Trp His
 705 710 715 720
 Lys Ser Arg Leu Leu Gln Ala Ser Gly Gly Gly Leu Ala Ser Met Pro
 725 730 735
 Gly Ser His Phe Val Gly Val Asp Gly Val Arg Ala Phe Leu Gln Thr
 740 745 750
 Tyr Ser His Glu Val Ser Leu Thr Ala Asp Ser Arg Lys Ser His Leu
 755 760 765
 Ile Phe Pro Gln Pro Asn Tyr Ala Asp Thr Leu Ile Ser Gln Glu Ser
 770 775 780
 Cys Glu Lys Lys Gly Phe Leu Ser Ala Pro Gln Ser Leu Leu Glu Asp
 785 790 795 800
 Lys Lys Glu Pro Phe Ser Gln Gln Ala Pro Pro Asn Thr Asp Trp Arg
 805 810 815
 Phe Ser Gln Ala Gln Arg Pro Gly Thr Ser Gly Ser Gln Asn Gly Asp
 820 825 830
 Asp Thr Gly Thr Trp Pro Asn Asn Gln Phe Asp Thr Glu Met Leu Gln
 835 840 845
 Ala Met Ile Leu Ala Ser Ala Ser Glu Ala Ala Asp Gly Ser Ser Thr
 850 855 860
 Leu Gly Gly Gly Ala Gly Thr Met Gly Leu Ser Ala Arg Tyr Gly Pro
 865 870 875 880
 Gln Phe Thr Leu Gln His Val Pro Asp Tyr Arg Gln Asn Val Tyr Ile
 885 890 895
 Pro Gly Ser Asn Ala Thr Leu Thr Asn Ala Ala Gly Lys Arg Asp Gly
 900 905 910
 Lys Ala Pro Ala Gly Gly Asn Gly Asn Lys Lys Lys Ser Gly Lys Lys
 915 920 925
 Glu Lys Lys
 930 931

<210> 1125
 <211> 1262
 <212> PRT
 <213> Homo sapiens

<400> 1125
 Met Asp Gln Met Pro Pro Tyr Tyr Ala Ala Ser His Lys Leu Ile Ala
 1 5 10 15
 Leu Ala Ile Cys Lys Leu Ile His Ile Thr Ile Glu Pro Leu Tyr Arg
 20 25 30

Ser	Val	Thr	Ser	Trp	Ala	Val	Asp	His	Ala	Gly	Phe	Leu	Glu	Ser	Asp
	35						40					45			
Pro	Cys	Asp	Ser	Thr	Val	Gly	His	Leu	Leu	Ser	Arg	Val	Gly	Val	Pro
	50					55					60				
Lys	Gly	Ala	Lys	Gly	Ser	Pro	Val	Asn	Ala	Leu	Gln	Asn	Lys	Arg	Ala
	65					70				75					80
Pro	Lys	Gln	Ala	Glu	Ser	Phe	Glu	Asp	Leu	Arg	Arg	Asp	Val	Phe	Asn
			85						90					95	
Met	Phe	Cys	Tyr	Leu	Gly	Pro	His	Leu	Ser	His	Asp	Pro	Ile	Leu	Phe
			100					105					110		
Ala	Lys	Val	Val	Arg	Ile	Gly	Lys	Ser	Phe	Met	Lys	Glu	Phe	Gln	Ser
		115					120					125			
Asp	Gly	Ser	Lys	Gln	Glu	Asp	Lys	Glu	Lys	Thr	Glu	Val	Ile	Leu	Ser
	130					135					140				
Cys	Leu	Leu	Ser	Ile	Thr	Asp	Gln	Val	Leu	Leu	Pro	Ser	Leu	Ser	Leu
	145				150					155					160
Met	Asp	Cys	Asn	Ala	Cys	Met	Ser	Glu	Glu	Leu	Trp	Gly	Met	Phe	Lys
			165						170					175	
Thr	Phe	Pro	Tyr	Gln	His	Arg	Tyr	Arg	Leu	Tyr	Gly	Gln	Trp	Lys	Asn
			180					185					190		
Glu	Thr	Tyr	Asn	Ser	His	Pro	Leu	Leu	Val	Lys	Val	Lys	Ala	Gln	Thr
		195					200					205			
Ile	Asp	Arg	Ala	Lys	Tyr	Ile	Met	Lys	Arg	Leu	Thr	Lys	Glu	Asn	Val
	210					215					220				
Lys	Pro	Ser	Gly	Arg	Gln	Ile	Gly	Lys	Leu	Ser	His	Ser	Asn	Pro	Thr
	225				230					235					240
Ile	Leu	Phe	Asp	Tyr	Val	Cys	Phe	Glu	Ile	Leu	Ser	Gln	Ile	Gln	Lys
			245						250					255	
Tyr	Asp	Asn	Leu	Ile	Thr	Pro	Val	Val	Asp	Ser	Leu	Lys	Tyr	Leu	Thr
			260					265					270		
Ser	Leu	Asn	Tyr	Asp	Val	Leu	Ala	Cys	Ile	Leu	Ser	Asn	Cys	Ile	Ile
	275						280					285			
Glu	Ala	Leu	Ala	Asn	Pro	Glu	Lys	Glu	Arg	Met	Lys	His	Asp	Asp	Thr
	290					295					300				
Thr	Ile	Ser	Ser	Trp	Leu	Gln	Ser	Leu	Ala	Ser	Phe	Cys	Gly	Ala	Val
	305				310					315					320
Phe	Arg	Lys	Tyr	Pro	Ile	Asp	Leu	Ala	Gly	Leu	Leu	Gln	Tyr	Val	Ala
			325						330					335	
Asn	Gln	Leu	Lys	Ala	Gly	Lys	Ser	Phe	Asp	Leu	Leu	Ile	Leu	Lys	Glu
		340						345					350		
Val	Val	Gln	Lys	Met	Ala	Gly	Ile	Glu	Ile	Thr	Glu	Glu	Met	Thr	Met
		355					360					365			
Glu	Gln	Leu	Glu	Ala	Met	Thr	Gly	Gly	Glu	Gln	Leu	Lys	Ala	Glu	Gly
	370					375					380				
Gly	Tyr	Phe	Gly	Gln	Ile	Arg	Asn	Thr	Lys	Lys	Ser	Ser	Gln	Arg	Leu
	385				390					395					400
Lys	Asp	Ala	Leu	Leu	Asp	His	Asp	Leu	Ala	Leu	Pro	Leu	Cys	Leu	Leu
			405						410					415	
Met	Ala	Gln	Gln	Arg	Asn	Gly	Val	Ile	Phe	Gln	Glu	Gly	Gly	Glu	Lys
		420						425					430		
His	Leu	Lys	Leu	Val	Gly	Lys	Leu	Tyr	Asp	Gln	Cys	His	Asp	Thr	Leu
		435					440					445			
Val	Gln	Phe	Gly	Gly	Phe	Leu	Ala	Ser	Asn	Leu	Ser	Thr	Glu	Asp	Tyr
		450				455					460				
Ile	Lys	Arg	Val	Pro	Ser	Ile	Asp	Val	Leu	Cys	Asn	Glu	Phe	His	Thr
	465				470					475					480
Pro	His	Asp	Ala	Ala	Phe	Phe	Leu	Ser	Arg	Pro	Met	Tyr	Ala	His	His
			485						490					495	
Ile	Ser	Ser	Lys	Tyr	Asp	Glu	Leu	Lys	Lys	Ser	Glu	Lys	Gly	Ser	Lys
			500					505					510		
Gln	Gln	His	Lys	Val	His	Lys	Tyr	Ile	Thr	Ser	Cys	Glu	Met	Val	Met
		515					520					525			
Ala	Pro	Val	His	Glu	Ala	Val	Val	Ser	Leu	His	Val	Ser	Lys	Val	Trp
	530					535					540				

Asp	Asp	Ile	Ser	Pro	Gln	Phe	Tyr	Ala	Thr	Phe	Trp	Ser	Leu	Thr	Met
545					550					555					560
Tyr	Asp	Leu	Ala	Val	Pro	His	Thr	Ser	Tyr	Glu	Arg	Glu	Val	Asn	Lys
				565					570						575
Leu	Lys	Val	Gln	Met	Lys	Ala	Ile	Asp	Asn	Gln	Glu	Met	Pro	Pro	
				580				585					590		
Asn	Lys	Lys	Lys	Lys	Glu	Lys	Glu	Arg	Cys	Thr	Ala	Leu	Gln	Asp	Lys
		595					600					605			
Leu	Leu	Glu	Glu	Glu	Lys	Lys	Gln	Met	Glu	His	Val	Gln	Arg	Val	Leu
	610					615					620				
Gln	Arg	Leu	Lys	Leu	Glu	Lys	Asp	Asn	Trp	Leu	Leu	Ala	Lys	Ser	Thr
625					630					635					640
Lys	Asn	Glu	Thr	Ile	Thr	Lys	Phe	Leu	Gln	Leu	Cys	Ile	Phe	Pro	Arg
				645					650						655
Cys	Ile	Phe	Ser	Ala	Ile	Asp	Ala	Val	Tyr	Cys	Ala	Arg	Phe	Val	Glu
			660					665					670		
Leu	Val	His	Gln	Gln	Lys	Thr	Pro	Asn	Phe	Ser	Thr	Leu	Leu	Cys	Tyr
		675					680					685			
Asp	Arg	Val	Phe	Ser	Asp	Ile	Ile	Tyr	Thr	Val	Ala	Ser	Cys	Thr	Glu
	690					695						700			
Asn	Glu	Ala	Ser	Arg	Tyr	Gly	Arg	Phe	Leu	Cys	Cys	Met	Leu	Glu	Thr
705					710					715					720
Val	Thr	Arg	Trp	His	Ser	Asp	Arg	Ala	Thr	Tyr	Glu	Lys	Glu	Cys	Gly
				725					730						735
Asn	Tyr	Pro	Gly	Phe	Leu	Thr	Ile	Leu	Arg	Ala	Thr	Gly	Phe	Asp	Gly
			740					745					750		
Gly	Asn	Lys	Ala	Asp	Gln	Leu	Asp	Tyr	Glu	Asn	Phe	Arg	His	Val	Val
	755					760						765			
His	Lys	Trp	His	Tyr	Lys	Leu	Thr	Lys	Ala	Ser	Val	His	Cys	Leu	Glu
	770					775					780				
Thr	Gly	Glu	Tyr	Thr	His	Ile	Arg	Asn	Ile	Leu	Ile	Val	Leu	Thr	Lys
785					790					795					800
Ile	Leu	Pro	Trp	Tyr	Pro	Lys	Val	Leu	Asn	Leu	Gly	Gln	Ala	Leu	Glu
				805					810						815
Arg	Arg	Val	His	Lys	Ile	Cys	Gln	Glu	Glu	Lys	Glu	Lys	Arg	Pro	Asp
			820					825					830		
Leu	Tyr	Ala	Leu	Ala	Met	Gly	Tyr	Ser	Gly	Gln	Leu	Lys	Ser	Arg	Lys
		835				840						845			
Ser	Tyr	Met	Ile	Pro	Glu	Asn	Glu	Phe	His	His	Lys	Asp	Pro	Pro	Pro
	850					855					860				
Arg	Asn	Ala	Val	Ala	Ser	Val	Gln	Asn	Gly	Pro	Gly	Gly	Gly	Pro	Ser
865					870					875					880
Ser	Ser	Ser	Ile	Gly	Ser	Ala	Ser	Lys	Ser	Asp	Glu	Ser	Ser	Thr	Glu
				885					890					895	
Glu	Thr	Asp	Lys	Ser	Arg	Glu	Arg	Ser	Gln	Cys	Gly	Val	Lys	Ala	Val
			900					905					910		
Asn	Lys	Ala	Ser	Ser	Thr	Thr	Pro	Lys	Gly	Asn	Ser	Ser	Asn	Gly	Asn
		915					920					925			
Ser	Gly	Ser	Asn	Ser	Asn	Lys	Ala	Val	Lys	Glu	Asn	Asp	Lys	Glu	Lys
	930					935					940				
Gly	Lys	Glu	Lys	Glu	Lys	Glu	Lys	Lys	Glu	Lys	Thr	Pro	Ala	Thr	Thr
945					950					955					960
Pro	Glu	Ala	Arg	Val	Leu	Gly	Lys	Asp	Gly	Lys	Glu	Lys	Pro	Lys	Glu
				965					970					975	
Glu	Arg	Pro	Asn	Lys	Asp	Glu	Lys	Ala	Arg	Glu	Thr	Lys	Glu	Arg	Thr
			980					985					990		
Pro	Lys	Ser	Asp	Lys	Glu	Lys	Glu	Lys	Phe	Lys	Lys	Glu	Glu	Lys	Ala
		995					1000					1005			
Lys	Asp	Glu	Lys	Phe	Lys	Thr	Thr	Val	Pro	Asn	Ala	Glu	Ser	Lys	Ser
	1010					1015					1020				
Thr	Gln	Glu	Arg	Glu	Arg	Glu	Lys	Glu	Pro	Ser	Arg	Glu	Arg	Asp	Ile
1025					1030					1035					1040
Ala	Lys	Glu	Met	Lys	Ser	Lys	Glu	Asn	Val	Lys	Gly	Gly	Glu	Lys	Thr
				1045					1050					1055	

Pro Val Ser Gly Ser Leu Lys Ser Pro Val Pro Arg Ser Asp Ile Pro
 1060 1065 1070
 Glu Pro Glu Arg Glu Gln Lys Arg Arg Lys Ile Asp Thr His Pro Ser
 1075 1080 1085
 Pro Ser His Ser Ser Thr Val Lys Asp Ser Leu Ile Glu Leu Lys Glu
 1090 1095 1100
 Ser Ser Ala Lys Leu Tyr Ile Asn His Thr Pro Pro Pro Leu Ser Lys
 1105 1110 1115 1120
 Ser Lys Glu Arg Glu Met Asp Lys Lys Asp Leu Asp Lys Ser Arg Glu
 1125 1130 1135
 Arg Ser Arg Glu Arg Glu Lys Lys Asp Glu Lys Asp Arg Lys Glu Arg
 1140 1145 1150
 Lys Arg Asp His Ser Asn Asn Asp Arg Glu Val Pro Pro Asp Leu Thr
 1155 1160 1165
 Lys Arg Arg Lys Glu Glu Asn Gly Thr Met Gly Val Ser Lys His Lys
 1170 1175 1180
 Ser Glu Ser Pro Cys Glu Ser Pro Tyr Pro Asn Glu Lys Asp Lys Glu
 1185 1190 1195 1200
 Lys Asn Lys Ser Lys Ser Ser Gly Lys Glu Lys Gly Ser Asp Ser Phe
 1205 1210 1215
 Lys Ser Glu Lys Met Asp Lys Ile Ser Ser Gly Gly Lys Lys Glu Ser
 1220 1225 1230
 Arg His Asp Lys Glu Lys Ile Glu Lys Lys Glu Lys Arg Asp Ser Ser
 1235 1240 1245
 Gly Gly Lys Glu Glu Lys Lys Gln Ser Ser Asp Lys His Arg
 1250 1255 1260 1262

<210> 1126

<211> 271

<212> PRT

<213> Homo sapiens

<400> 1126

Met Ala Gly Pro Gln Gln Gln Pro Pro Tyr Leu His Leu Ala Glu Leu
 1 5 10 15
 Thr Ala Ser Gln Phe Leu Glu Ile Trp Lys His Phe Asp Ala Asp Gly
 20 25 30
 Asn Gly Tyr Ile Glu Gly Lys Glu Leu Glu Asn Phe Phe Gln Glu Leu
 35 40 45
 Glu Lys Ala Arg Lys Gly Ser Gly Met Met Ser Lys Ser Asp Asn Phe
 50 55 60
 Gly Glu Lys Met Lys Glu Phe Met Gln Lys Tyr Asp Lys Asn Ser Asp
 65 70 75 80
 Gly Lys Ile Glu Met Ala Glu Leu Ala Gln Ile Leu Pro Thr Glu Glu
 85 90 95
 Asn Phe Leu Leu Cys Phe Arg Gln His Val Gly Ser Ser Ala Glu Phe
 100 105 110
 Met Glu Ala Trp Arg Lys Tyr Asp Thr Asp Arg Ser Gly Tyr Ile Glu
 115 120 125
 Ala Asn Glu Leu Lys Gly Phe Leu Ser Asp Leu Leu Lys Lys Ala Asn
 130 135 140
 Arg Pro Tyr Asp Glu Pro Lys Leu Gln Glu Tyr Thr Gln Thr Ile Leu
 145 150 155 160
 Arg Met Phe Asp Leu Asn Gly Asp Gly Lys Leu Gly Leu Ser Glu Met
 165 170 175
 Ser Arg Leu Leu Pro Val Gln Glu Asn Phe Leu Leu Lys Phe Gln Gly
 180 185 190
 Met Lys Leu Thr Ser Glu Glu Phe Asn Ala Ile Phe Thr Phe Tyr Asp
 195 200 205
 Lys Asp Arg Ser Gly Tyr Ile Asp Glu His Glu Leu Asp Ala Leu Leu
 210 215 220

Lys Asp Leu Tyr Glu Lys Asn Lys Lys Glu Met Asn Ile Gln Gln Leu
 225 230 235 240
 Thr Asn Tyr Arg Lys Ser Val Met Ser Leu Ala Glu Ala Gly Lys Leu
 245 250 255
 Tyr Arg Lys Asp Leu Glu Ile Val Leu Cys Ser Glu Pro Pro Met
 260 265 270 271

<210> 1127
 <211> 293
 <212> PRT
 <213> Homo sapiens

<400> 1127
 Met Pro Leu His Val Lys Trp Pro Phe Pro Ala Val Pro Pro Leu Thr
 1 5 10 15
 Trp Thr Leu Ala Ser Ser Val Val Met Gly Leu Val Gly Thr Tyr Ser
 20 25 30
 Cys Phe Trp Thr Lys Tyr Met Asn His Leu Thr Val His Asn Arg Glu
 35 40 45
 Val Leu Tyr Glu Leu Ile Glu Lys Arg Gly Pro Ala Thr Pro Leu Ile
 50 55 60
 Thr Val Ser Asn His Gln Ser Cys Met Asp Asp Pro His Leu Trp Gly
 65 70 75 80
 Ile Leu Lys Leu Arg His Ile Trp Asn Leu Lys Leu Met Arg Trp Thr
 85 90 95
 Pro Ala Ala Ala Asp Ile Cys Phe Thr Lys Glu Leu His Ser His Phe
 100 105 110
 Phe Ser Leu Gly Lys Cys Val Pro Val Cys Arg Gly Ala Glu Phe Phe
 115 120 125
 Gln Ala Glu Asn Glu Gly Lys Gly Val Leu Asp Thr Gly Arg His Met
 130 135 140
 Pro Gly Ala Gly Lys Arg Arg Glu Lys Gly Asp Gly Val Tyr Gln Lys
 145 150 155 160
 Gly Met Asp Phe Ile Leu Glu Lys Leu Asn His Gly Asp Trp Val His
 165 170 175
 Ile Phe Pro Glu Gly Lys Val Asn Met Ser Ser Glu Phe Leu Arg Phe
 180 185 190
 Lys Trp Gly Ile Gly Arg Leu Ile Ala Glu Cys His Leu Asn Pro Ile
 195 200 205
 Ile Leu Pro Leu Trp His Val Gly Met Asn Asp Val Leu Pro Asn Ser
 210 215 220
 Pro Pro Tyr Phe Pro Arg Phe Gly Gln Lys Ile Thr Val Leu Ile Gly
 225 230 235 240
 Lys Pro Phe Ser Ala Leu Pro Val Leu Glu Arg Leu Arg Ala Glu Asn
 245 250 255
 Lys Ser Ala Val Glu Met Arg Lys Ala Leu Thr Asp Phe Ile Gln Glu
 260 265 270
 Glu Phe Gln His Leu Lys Thr Gln Ala Glu Gln Leu His Asn His Leu
 275 280 285
 Gln Pro Gly Arg *
 290 292

<210> 1128
 <211> 856
 <212> PRT
 <213> Homo sapiens

<400> 1128

Met	Ser	Ala	Pro	Ser	Glu	Glu	Glu	Glu	Tyr	Ala	Arg	Leu	Val	Met	Glu
1				5					10					15	
Ala	Gln	Pro	Glu	Trp	Leu	Arg	Ala	Glu	Val	Lys	Arg	Leu	Ser	His	Glu
		20						25					30		
Leu	Ala	Glu	Thr	Thr	Arg	Glu	Lys	Ile	Gln	Ala	Ala	Glu	Tyr	Gly	Leu
	35						40					45			
Ala	Val	Leu	Glu	Glu	Lys	His	Gln	Leu	Lys	Leu	Gln	Phe	Glu	Glu	Leu
	50					55					60				
Glu	Val	Asp	Tyr	Glu	Ala	Ile	Arg	Ser	Glu	Met	Glu	Gln	Leu	Lys	Glu
	65				70					75				80	
Ala	Phe	Gly	Gln	Ala	His	Thr	Asn	His	Lys	Lys	Val	Ala	Ala	Asp	Gly
				85					90					95	
Glu	Ser	Arg	Glu	Glu	Ser	Leu	Ile	Gln	Glu	Ser	Ala	Ser	Lys	Glu	Gln
			100					105					110		
Tyr	Tyr	Val	Arg	Lys	Val	Leu	Glu	Leu	Gln	Thr	Glu	Leu	Lys	Gln	Leu
	115						120					125			
Arg	Asn	Val	Leu	Thr	Asn	Thr	Gln	Ser	Glu	Asn	Glu	Arg	Leu	Ala	Ser
	130					135					140				
Val	Ala	Gln	Glu	Leu	Lys	Glu	Ile	Asn	Gln	Asn	Val	Glu	Ile	Gln	Arg
	145				150					155				160	
Gly	Arg	Leu	Arg	Asp	Ile	Lys	Glu	Tyr	Lys	Phe	Arg	Glu	Ala	Arg	
			165					170					175		
Leu	Leu	Gln	Asp	Tyr	Ser	Glu	Leu	Glu	Glu	Glu	Asn	Ile	Ser	Leu	Gln
			180					185					190		
Lys	Gln	Val	Ser	Val	Leu	Arg	Gln	Asn	Gln	Val	Glu	Phe	Glu	Gly	Leu
	195						200					205			
Lys	His	Glu	Ile	Lys	Arg	Leu	Glu	Glu	Glu	Thr	Glu	Tyr	Leu	Asn	Ser
	210					215					220				
Gln	Leu	Glu	Asp	Ala	Ile	Arg	Leu	Lys	Glu	Ile	Ser	Glu	Arg	Gln	Leu
	225				230					235				240	
Glu	Glu	Ala	Leu	Glu	Thr	Leu	Lys	Thr	Glu	Arg	Glu	Gln	Lys	Asn	Ser
			245						250					255	
Leu	Arg	Lys	Glu	Leu	Ser	His	Tyr	Met	Ser	Ile	Asn	Asp	Ser	Phe	Tyr
			260					265					270		
Thr	Ser	His	Leu	His	Val	Ser	Leu	Asp	Gly	Leu	Lys	Phe	Ser	Asp	Asp
		275					280					285			
Ala	Ala	Glu	Pro	Asn	Asn	Asp	Ala	Glu	Ala	Leu	Val	Asn	Gly	Phe	Glu
	290					295					300				
His	Gly	Gly	Leu	Ala	Lys	Leu	Pro	Leu	Asp	Asn	Lys	Thr	Ser	Thr	Pro
	305				310					315				320	
Lys	Lys	Glu	Gly	Leu	Ala	Pro	Pro	Ser	Pro	Ser	Leu	Val	Ser	Asp	Leu
			325						330					335	
Leu	Ser	Glu	Leu	Asn	Ile	Ser	Glu	Ile	Gln	Lys	Leu	Lys	Gln	Gln	Leu
			340					345					350		
Met	Gln	Met	Glu	Arg	Glu	Lys	Ala	Gly	Leu	Leu	Ala	Thr	Leu	Gln	Asp
		355					360					365			
Thr	Gln	Lys	Gln	Leu	Glu	His	Thr	Arg	Gly	Ser	Leu	Ser	Glu	Gln	Gln
	370					375					380				
Glu	Lys	Val	Thr	Arg	Leu	Thr	Glu	Asn	Leu	Ser	Ala	Leu	Arg	Arg	Leu
	385				390					395				400	
Gln	Ala	Ser	Lys	Glu	Arg	Gln	Thr	Ala	Leu	Asp	Asn	Glu	Lys	Asp	Arg
			405						410					415	
Asp	Ser	His	Glu	Asp	Gly	Asp	Tyr	Tyr	Glu	Val	Asp	Ile	Asn	Gly	Pro
			420					425					430		
Glu	Ile	Leu	Ala	Cys	Lys	Tyr	His	Val	Ala	Val	Ala	Glu	Ala	Gly	Glu
		435					440					445			
Leu	Arg	Glu	Gln	Leu	Lys	Ala	Leu	Arg	Ser	Thr	His	Glu	Ala	Arg	Glu
	450					455					460				
Ala	Gln	His	Ala	Glu	Glu	Lys	Gly	Arg	Tyr	Glu	Ala	Glu	Gly	Gln	Ala
	465				470					475				480	
Leu	Thr	Glu	Lys	Val	Ser	Leu	Leu	Glu	Lys	Ala	Ser	Arg	Gln	Asp	Arg
			485						490					495	
Glu	Leu	Leu	Ala	Arg	Leu	Glu	Lys	Glu	Leu	Lys	Lys	Val	Ser	Asp	Val
			500					505						510	

Ala Gly Glu Thr Gln Gly Ser Leu Ser Val Ala Gln Asp Glu Leu Val
 515 520 525
 Thr Phe Ser Glu Glu Leu Ala Asn Leu Tyr His His Val Cys Met Cys
 530 535 540
 Asn Asn Glu Thr Pro Asn Arg Val Met Leu Asp Tyr Tyr Arg Glu Gly
 545 550 555 560
 Gln Gly Gly Ala Gly Arg Thr Ser Pro Gly Gly Arg Thr Ser Pro Glu
 565 570 575
 Ala Arg Gly Arg Arg Ser Pro Ile Leu Leu Pro Lys Gly Leu Leu Ala
 580 585 590
 Pro Glu Ala Gly Arg Ala Asp Gly Gly Thr Gly Asp Ser Ser Pro Ser
 595 600 605
 Pro Gly Ser Ser Leu Pro Ser Pro Leu Ser Asp Pro Arg Arg Glu Pro
 610 615 620
 Met Asn Ile Tyr Asn Leu Ile Ala Ile Ile Arg Asp Gln Ile Lys His
 625 630 635 640
 Leu Gln Ala Ala Val Asp Arg Thr Thr Glu Leu Ser Arg Gln Arg Ile
 645 650 655
 Ala Ser Gln Glu Leu Gly Pro Ala Val Asp Lys Asp Lys Glu Ala Leu
 660 665 670
 Met Glu Glu Ile Leu Lys Leu Lys Ser Leu Leu Ser Thr Lys Arg Glu
 675 680 685
 Gln Ile Thr Thr Leu Arg Thr Val Leu Lys Ala Asn Lys Gln Thr Ala
 690 695 700
 Glu Val Ala Leu Ala Asn Leu Lys Ser Lys Tyr Glu Asn Glu Lys Ala
 705 710 715 720
 Met Val Thr Glu Thr Met Met Lys Leu Arg Asn Glu Leu Lys Ala Leu
 725 730 735
 Lys Glu Asp Ala Ala Thr Phe Ser Ser Leu Arg Ala Met Phe Ala Thr
 740 745 750
 Arg Cys Asp Glu Tyr Ile Thr Gln Leu Asp Glu Met Gln Arg Gln Leu
 755 760 765
 Ala Ala Ala Glu Asp Glu Lys Lys Thr Leu Asn Ser Leu Leu Arg Met
 770 775 780
 Ala Ile Gln Gln Lys Leu Ala Leu Thr Gln Arg Leu Glu Leu Leu Glu
 785 790 795 800
 Leu Asp His Glu Gln Thr Arg Arg Gly Arg Ala Lys Ala Ala Pro Lys
 805 810 815
 Thr Lys Pro Ala Thr Pro Ser Val Ser His Thr Cys Ala Cys Ala Ser
 820 825 830
 Asp Arg Ala Glu Gly Thr Gly Leu Ala Asn Gln Val Phe Cys Ser Glu
 835 840 845
 Lys His Ser Ile Tyr Cys Asp *
 850 855

<210> 1129
 <211> 310
 <212> PRT
 <213> Homo sapiens

<400> 1129
 Met Val Lys Val Val Pro Ala Thr Arg Gly Asn Leu Pro Arg Ser Gln
 1 5 10 15
 Leu Thr Gly Thr His Gln His Cys Gln Pro Arg Glu Pro Lys Ile Thr
 20 25 30
 Ala Ser Glu Arg Leu Arg Arg Arg Pro Arg Ala Thr Ala Arg Leu Arg
 35 40 45
 Ala His Ala Ala Pro Pro Glu Pro Pro Leu Ala Val Phe Ala Pro Pro
 50 55 60
 Ser Asp Arg Lys Glu Leu Leu Ala Leu Pro Val Ala Cys Asp Pro Val
 65 70 75 80

```

Ile Ala Ser Val Met Ser Trp Val Gln Ala Ala Ser Leu Ile Gln Gly
      85                      90                      95
Pro Gly Asp Lys Gly Asp Val Phe Asp Glu Glu Ala Asp Glu Ser Leu
      100                    105                    110
Leu Ala Gln Arg Glu Trp Gln Ser Asn Met Gln Arg Arg Val Lys Glu
      115                    120                    125
Gly Tyr Arg Asp Gly Ile Asp Ala Gly Lys Ala Val Thr Leu Gln Gln
      130                    135                    140
Gly Phe Asn Gln Gly Tyr Lys Lys Gly Ala Glu Val Ile Leu Asn Tyr
      145                    150                    155                    160
Gly Arg Leu Arg Gly Thr Leu Ser Ala Leu Leu Ser Trp Cys His Leu
      165                    170                    175
His Asn Asn Asn Ser Thr Leu Ile Asn Lys Ile Asn Asn Leu Leu Asp
      180                    185                    190
Ala Val Gly Gln Cys Glu Glu Tyr Val Leu Lys His Leu Lys Ser Ile
      195                    200                    205
Thr Pro Pro Ser His Val Val Asp Leu Leu Asp Ser Ile Glu Asp Met
      210                    215                    220
Asp Leu Cys His Val Val Pro Ala Glu Lys Lys Ile Asp Glu Ala Lys
      225                    230                    235                    240
Asp Glu Arg Leu Cys Glu Asn Asn Ala Glu Phe Asn Lys Asn Cys Ser
      245                    250                    255
Lys Ser His Ser Gly Ile Asp Cys Ser Tyr Val Glu Cys Cys Arg Thr
      260                    265                    270
Gln Glu His Ala His Ser Glu Asn Pro Ser Pro Thr Trp Ile Leu Glu
      275                    280                    285
Gln Thr Ala Ser Leu Val Lys Gln Leu Gly Leu Ser Val Asp Val Leu
      290                    295                    300
Gln His Leu Lys Gln Leu
      305                    310

```

<210> 1130
 <211> 135
 <212> PRT
 <213> Homo sapiens

```

<400> 1130
Ile Trp Pro Ser Arg Pro Arg Ile Arg His Glu Arg Pro Ala Ser Glu
  1                      5                      10                      15
Arg Glu Cys Ser Leu Cys Gln Arg Leu Lys Arg Glu Leu Asn Met Gly
      20                    25                    30
Asp Val Glu Lys Gly Lys Lys Ile Phe Ile Met Lys Cys Ser Gln Cys
      35                    40                    45
His Thr Val Glu Lys Gly Gly Lys His Lys Ala Gly Pro Thr Leu His
      50                    55                    60
Gly Leu Phe Gly Arg Lys Thr Gly Gln Ala Pro Gly Tyr Ser Tyr Thr
      65                    70                    75                    80
Ala Ala Asn Lys Asn Lys Gly Ile Ile Trp Gly Glu Asp Thr Leu Met
      85                    90                    95
Glu Tyr Leu Glu Asn Pro Lys Lys Tyr Ile Pro Gly Thr Lys Met Ile
      100                    105                    110
Phe Val Gly Ile Lys Lys Lys Glu Glu Arg Ala Asp Leu Ile Ala Tyr
      115                    120                    125
Leu Lys Lys Ala Thr Asn Glu
      130                    135

```

<210> 1131
 <211> 483
 <212> PRT

<213> Homo sapiens

<400> 1131

```

Met His Ala Tyr Val Ser Leu Asp Pro Leu Glu Arg Pro Leu Pro Leu
 1          5          10          15
Pro Gly Asp Gly Arg Gln Ser Arg Arg Asp Ala Glu Glu Pro Ala Ala
          20          25          30
Arg Ala Arg Cys Arg Arg Gly Thr Ala Phe Arg Ala Gly Pro Ala Ser
          35          40          45
Leu Ala Gly Glu Asp Ala Leu Val Ser Val Met Gly Cys Gly Thr Ser
          50          55          60
Lys Val Leu Pro Glu Pro Pro Lys Asp Val Gln Leu Asp Leu Val Lys
          65          70          75          80
Lys Val Glu Pro Phe Ser Gly Thr Lys Ser Asp Val Tyr Lys His Phe
          85          90          95
Ile Thr Glu Val Asp Ser Val Gly Pro Val Lys Ala Gly Phe Pro Ala
          100          105          110
Ala Ser Gln Tyr Ala His Pro Cys Pro Gly Pro Pro Thr Ala Gly His
          115          120          125
Thr Glu Pro Pro Ser Glu Pro Pro Arg Arg Ala Arg Val Ala Lys Tyr
          130          135          140
Arg Ala Lys Phe Asp Pro Arg Val Thr Ala Lys Tyr Asp Ile Lys Ala
          145          150          155          160
Leu Ile Gly Arg Gly Ser Phe Ser Arg Val Val Arg Val Glu His Arg
          165          170          175
Ala Thr Arg Gln Pro Tyr Ala Ile Lys Met Ile Glu Thr Lys Tyr Arg
          180          185          190
Glu Gly Arg Glu Val Cys Glu Ser Glu Leu Arg Val Leu Arg Arg Val
          195          200          205
Arg His Ala Asn Ile Ile Gln Leu Val Glu Val Phe Glu Thr Gln Glu
          210          215          220
Arg Val Tyr Met Val Met Glu Leu Ala Thr Gly Gly Glu Leu Phe Asp
          225          230          235          240
Arg Ile Ile Ala Lys Gly Ser Phe Thr Glu Arg Asp Ala Thr Arg Val
          245          250          255
Leu Gln Met Val Leu Asp Gly Val Arg Tyr Leu His Ala Leu Gly Ile
          260          265          270
Thr His Arg Asp Leu Lys Pro Glu Asn Leu Leu Tyr Tyr His Pro Gly
          275          280          285
Thr Asp Ser Lys Ile Ile Ile Thr Asp Phe Gly Leu Ala Ser Ala Arg
          290          295          300
Lys Lys Gly Asp Asp Cys Leu Met Lys Thr Thr Cys Gly Thr Pro Glu
          305          310          315          320
Tyr Ile Ala Pro Glu Val Leu Val Arg Lys Pro Tyr Thr Asn Ser Val
          325          330          335
Asp Met Trp Ala Leu Gly Val Ile Ala Tyr Ile Leu Leu Ser Gly Thr
          340          345          350
Met Pro Phe Glu Asp Asp Asn Arg Thr Arg Leu Tyr Arg Gln Ile Leu
          355          360          365
Arg Gly Lys Tyr Ser Tyr Ser Gly Glu Pro Trp Pro Ser Val Ser Asn
          370          375          380
Leu Ala Lys Asp Phe Ile Asp Arg Leu Leu Thr Val Asp Pro Gly Ala
          385          390          395          400
Arg Met Thr Ala Leu Gln Ala Leu Arg His Pro Trp Val Val Ser Met
          405          410          415
Ala Ala Ser Ser Ser Met Lys Asn Leu His Arg Ser Ile Ser Gln Asn
          420          425          430
Leu Leu Lys Arg Ala Ser Ser Arg Cys Gln Ser Thr Lys Ser Ala Gln
          435          440          445
Ser Thr Arg Ser Ser Arg Ser Thr Arg Ser Asn Lys Ser Arg Arg Val
          450          455          460
Arg Glu Arg Glu Leu Arg Glu Leu Asn Leu Arg Tyr Gln Gln Gln Tyr
          465          470          475          480

```

Asn Gly *
482

<210> 1132
<211> 423
<212> PRT
<213> Homo sapiens

<400> 1132
Met Phe Ala Asp Leu Asp Tyr Asp Ile Glu Glu Asp Lys Leu Gly Ile
1 5 10 15
Pro Thr Val Pro Gly Lys Val Thr Leu Gln Lys Asp Ala Gln Asn Leu
20 25 30
Ile Gly Ile Ser Ile Gly Gly Gly Ala Gln Tyr Cys Pro Cys Leu Tyr
35 40 45
Ile Val Gln Val Phe Asp Asn Thr Pro Ala Ala Leu Asp Gly Thr Val
50 55 60
Ala Ala Gly Asp Glu Ile Thr Gly Val Asn Gly Arg Ser Ile Lys Gly
65 70 75 80
Lys Thr Lys Val Glu Val Ala Lys Met Ile Gln Glu Val Lys Gly Glu
85 90 95
Val Thr Ile His Tyr Asn Lys Leu Gln Ala Asp Pro Lys Gln Gly Met
100 105 110
Ser Leu Asp Ile Val Leu Lys Lys Val Lys His Arg Leu Val Glu Asn
115 120 125
Met Ser Ser Gly Thr Ala Asp Ala Leu Gly Leu Ser Arg Ala Ile Leu
130 135 140
Cys Asn Asp Gly Leu Val Lys Arg Leu Glu Glu Leu Glu Arg Thr Ala
145 150 155 160
Glu Leu Tyr Lys Gly Met Thr Glu His Thr Lys Asn Leu Leu Arg Ala
165 170 175
Phe Tyr Glu Leu Ser Gln Thr His Arg Gly Asn Gly Ile Pro Gln Ser
180 185 190
Cys Ala Phe Gly Asp Val Phe Ser Val Ile Gly Val Arg Glu Pro Gln
195 200 205
Pro Ala Ala Ser Glu Ala Phe Val Lys Phe Ala Asp Ala His Arg Ser
210 215 220
Ile Glu Lys Phe Gly Ile Arg Leu Leu Lys Thr Ile Lys Pro Met Leu
225 230 235 240
Thr Asp Leu Asn Thr Tyr Leu Asn Lys Ala Ile Pro Asp Thr Arg Leu
245 250 255
Thr Ile Lys Lys Tyr Leu Asp Val Lys Phe Glu Tyr Leu Ser Tyr Cys
260 265 270
Leu Lys Val Lys Glu Met Asp Asp Glu Glu Tyr Ser Cys Ile Ala Leu
275 280 285
Gly Glu Pro Leu Tyr Arg Val Ser Thr Gly Asn Tyr Glu Tyr Arg Leu
290 295 300
Ile Leu Arg Cys Arg Gln Glu Ala Arg Ala Arg Phe Ser Gln Met Arg
305 310 315 320
Lys Asp Val Leu Glu Lys Met Glu Leu Leu Asp Gln Lys His Val Gln
325 330 335
Asp Ile Val Phe Gln Leu Gln Arg Leu Val Ser Thr Met Ser Lys Tyr
340 345 350
Tyr Asn Asp Cys Tyr Ala Val Leu Arg Asp Ala Asp Val Phe Pro Ile
355 360 365
Glu Val Asp Leu Ala His Thr Thr Leu Ala Tyr Gly Leu Asn Gln Glu
370 375 380
Glu Phe Thr Asp Gly Glu Glu Glu Glu Glu Asp Thr Ala Ala
385 390 395 400
Gly Glu Pro Ser Arg Asp Thr Arg Gly Ala Ala Gly Pro Leu Asp Lys
405 410 415

Gly Gly Ser Trp Cys Asp Ser
420 423

<210> 1133
<211> 323
<212> PRT
<213> Homo sapiens

<400> 1133
Met Asp Ser Lys Gln Gln Cys Val Lys Leu Asn Asp Gly His Phe Met
1 5 10 15
Pro Val Leu Gly Phe Gly Thr Tyr Ala Pro Pro Glu Val Pro Arg Ser
20 25 30
Lys Ala Leu Glu Val Thr Lys Leu Ala Ile Glu Ala Gly Phe Arg His
35 40 45
Ile Asp Ser Ala His Leu Tyr Asn Asn Glu Glu Gln Val Gly Leu Ala
50 55 60
Ile Arg Ser Lys Ile Ala Asp Gly Ser Val Lys Arg Glu Asp Ile Phe
65 70 75 80
Tyr Thr Ser Lys Leu Trp Ser Thr Phe His Arg Pro Glu Leu Val Arg
85 90 95
Pro Ala Leu Glu Asn Ser Leu Lys Lys Ala Gln Leu Asp Tyr Val Asp
100 105 110
Leu Tyr Leu Ile His Ser Pro Met Ser Leu Lys Pro Gly Glu Glu Leu
115 120 125
Ser Pro Thr Asp Glu Asn Gly Lys Val Ile Phe Asp Ile Val Asp Leu
130 135 140
Cys Thr Thr Trp Glu Ala Met Glu Lys Cys Lys Asp Ala Gly Leu Ala
145 150 155 160
Lys Ser Ile Gly Val Ser Asn Phe Asn Arg Arg Gln Leu Glu Met Ile
165 170 175
Leu Asn Lys Pro Gly Leu Lys Tyr Lys Pro Val Cys Asn Gln Val Glu
180 185 190
Cys His Pro Tyr Phe Asn Arg Ser Lys Leu Leu Asp Phe Cys Lys Ser
195 200 205
Lys Asp Ile Val Leu Val Ala Tyr Ser Ala Leu Gly Ser Gln Arg Asp
210 215 220
Lys Arg Trp Val Asp Pro Asn Ser Pro Val Leu Leu Glu Asp Pro Val
225 230 235 240
Leu Cys Ala Leu Ala Lys Lys His Lys Arg Thr Pro Ala Leu Ile Ala
245 250 255
Leu Arg Tyr Gln Leu Gln Arg Gly Val Val Val Leu Ala Lys Ser Tyr
260 265 270
Asn Glu Gln Arg Ile Arg Gln Asn Val Gln Val Phe Glu Phe Gln Leu
275 280 285
Thr Ala Glu Asp Met Lys Ala Ile Asp Gly Leu Asp Arg Asn Leu His
290 295 300
Tyr Phe Asn Ser Asp Ser Phe Ala Ser His Pro Asn Tyr Pro Tyr Ser
305 310 315 320
Asp Glu Tyr
323

<210> 1134
<211> 284
<212> PRT
<213> Homo sapiens

<400> 1134

```

Met Ser Met Leu Pro Ser Phe Gly Phe Thr Gln Glu Gln Val Ala Cys
 1          5          10          15
Val Cys Glu Val Leu Gln Gln Gly Gly Asn Leu Glu Arg Leu Gly Arg
 20          25          30
Phe Leu Trp Ser Leu Pro Ala Cys Asp His Leu His Lys Asn Glu Ser
 35          40          45
Val Leu Lys Ala Lys Ala Val Val Ala Phe His Arg Gly Asn Phe Arg
 50          55          60
Glu Leu Tyr Lys Ile Leu Glu Ser His Gln Phe Ser Pro His Asn His
 65          70          75          80
Pro Lys Leu Gln Gln Leu Trp Leu Lys Ala His Tyr Val Glu Ala Glu
 85          90          95
Lys Leu Arg Gly Arg Pro Leu Gly Ala Val Gly Lys Tyr Arg Val Arg
100          105          110
Arg Lys Phe Pro Leu Pro Arg Thr Ile Trp Asp Gly Glu Glu Thr Ser
115          120          125
Tyr Cys Phe Lys Glu Lys Ser Arg Gly Val Leu Arg Glu Trp Tyr Ala
130          135          140
His Asn Pro Tyr Pro Ser Pro Arg Glu Lys Arg Glu Leu Ala Glu Ala
145          150          155          160
Thr Gly Leu Thr Thr Thr Gln Val Ser Asn Trp Phe Lys Asn Arg Arg
165          170          175
Gln Arg Asp Arg Ala Ala Glu Ala Lys Glu Arg Glu Asn Thr Glu Asn
180          185          190
Asn Asn Ser Ser Ser Asn Lys Gln Asn Gln Leu Ser Pro Leu Glu Gly
195          200          205
Gly Lys Pro Leu Met Ser Ser Ser Glu Glu Glu Phe Ser Pro Pro Gln
210          215          220
Ser Pro Asp Gln Asn Ser Val Leu Leu Leu Gln Gly Asn Met Gly His
225          230          235          240
Ala Arg Ser Ser Asn Tyr Ser Leu Pro Gly Leu Thr Ala Ser Gln Pro
245          250          255
Ser His Gly Leu Gln Thr His Gln His Gln Leu Gln Asp Ser Leu Leu
260          265          270
Gly Pro Leu Thr Ser Ser Leu Val Asp Leu Gly Ser
275          280          284

```

<210> 1135
 <211> 482
 <212> PRT
 <213> Homo sapiens

```

<400> 1135
Met Ala Asp Asn Asp Thr Asp Arg Asn Gln Thr Glu Lys Leu Leu Lys
 1          5          10          15
Arg Val Arg Glu Leu Glu Gln Glu Val Gln Arg Leu Lys Lys Glu Gln
 20          25          30
Ala Lys Asn Lys Glu Asp Ser Asn Ile Arg Glu Asn Ser Ser Gly Ala
 35          40          45
Gly Lys Thr Lys Arg Ala Phe Asp Phe Ser Ala His Gly Arg Arg His
 50          55          60
Val Ala Leu Arg Ile Ala Tyr Met Gly Trp Gly Tyr Gln Gly Phe Ala
 65          70          75          80
Ser Gln Glu Asn Thr Asn Asn Thr Ile Glu Glu Lys Leu Phe Glu Ala
 85          90          95
Leu Thr Lys Thr Arg Leu Val Glu Ser Arg Gln Thr Ser Asn Tyr His
100          105          110
Arg Cys Gly Arg Thr Asp Lys Gly Val Ser Ala Phe Gly Gln Val Ile
115          120          125
Ser Leu Asp Leu Arg Ser Gln Phe Pro Arg Gly Arg Asp Ser Glu Asp
130          135          140

```

Phe Asn Val Lys Glu Glu Ala Asn Ala Ala Glu Glu Ile Arg Tyr
 145 150 155 160
 Thr His Ile Leu Asn Arg Val Leu Pro Pro Asp Ile Arg Ile Leu Ala
 165 170 175
 Trp Ala Pro Val Glu Pro Ser Phe Ser Ala Arg Phe Ser Cys Leu Glu
 180 185 190
 Arg Thr Tyr Arg Tyr Phe Phe Pro Arg Ala Asp Leu Asp Ile Val Thr
 195 200 205
 Met Asp Tyr Ala Ala Gln Lys Tyr Val Gly Thr His Asp Phe Arg Asn
 210 215 220
 Leu Cys Lys Met Asp Val Ala Asn Gly Val Ile Asn Phe Gln Arg Thr
 225 230 235 240
 Ile Leu Ser Ala Gln Val Gln Leu Val Gly Gln Ser Pro Gly Glu Gly
 245 250 255
 Arg Trp Gln Glu Pro Phe Gln Leu Cys Gln Phe Glu Val Thr Gly Gln
 260 265 270
 Ala Phe Leu Tyr His Gln Val Arg Cys Met Met Ala Ile Leu Phe Leu
 275 280 285
 Ile Gly Gln Gly Met Glu Lys Pro Glu Ile Ile Asp Glu Leu Leu Asn
 290 295 300
 Ile Glu Lys Asn Pro Gln Lys Pro Gln Tyr Ser Met Ala Val Glu Phe
 305 310 315 320
 Pro Leu Val Leu Tyr Asp Cys Lys Phe Glu Asn Val Lys Trp Ile Tyr
 325 330 335
 Asp Gln Glu Ala Gln Glu Phe Asn Ile Thr His Leu Gln Gln Leu Trp
 340 345 350
 Ala Asn His Ala Val Lys Thr His Met Leu Tyr Ser Met Leu Gln Gly
 355 360 365
 Leu Asp Thr Val Pro Val Pro Cys Gly Ile Gly Pro Lys Met Asp Gly
 370 375 380
 Met Thr Glu Trp Gly Asn Val Lys Pro Ser Val Ile Lys Gln Thr Ser
 385 390 395 400
 Ala Phe Val Glu Gly Val Lys Met Arg Thr Tyr Lys Pro Leu Met Asp
 405 410 415
 Arg Pro Lys Cys Gln Gly Leu Glu Ser Arg Ile Gln His Phe Val Arg
 420 425 430
 Arg Gly Arg Ile Glu His Pro His Leu Phe His Glu Glu Glu Thr Lys
 435 440 445
 Ala Lys Arg Asp Cys Asn Asp Thr Leu Glu Glu Asp Asn Thr Asn Leu
 450 455 460
 Glu Thr Pro Thr Lys Arg Val Cys Val Asp Thr Glu Ile Lys Ser Ile
 465 470 475 480
 Ile *
 481

<210> 1136
 <211> 425
 <212> PRT
 <213> Homo sapiens

<400> 1136
 Met Asn Ala Met Leu Glu Thr Pro Glu Leu Pro Ala Val Phe Asp Gly
 1 5 10 15
 Val Lys Leu Ala Ala Val Ala Ala Val Leu Tyr Val Ile Val Arg Cys
 20 25 30
 Leu Asn Leu Lys Ser Pro Thr Ala Pro Pro Asp Leu Tyr Phe Gln Asp
 35 40 45
 Ser Gly Leu Ser Arg Phe Leu Leu Lys Ser Cys Pro Leu Leu Thr Lys
 50 55 60
 Glu Tyr Ile Pro Pro Leu Ile Trp Gly Lys Ser Gly His Ile Gln Thr
 65 70 75 80

Ala Leu Tyr Gly Lys Met Gly Arg Val Arg Ser Pro His Pro Tyr Gly
 85 90 95
 His Arg Lys Phe Ile Thr Met Ser Asp Gly Ala Thr Ser Thr Phe Asp
 100 105 110
 Leu Phe Glu Pro Leu Ala Glu His Cys Val Gly Asp Asp Ile Thr Met
 115 120 125
 Val Ile Cys Pro Gly Ile Ala Asn His Ser Glu Lys Gln Tyr Ile Arg
 130 135 140
 Thr Phe Val Asp Tyr Ala Gln Lys Asn Gly Tyr Arg Cys Ala Val Leu
 145 150 155 160
 Asn His Leu Gly Ala Leu Pro Asn Ile Glu Leu Thr Ser Pro Arg Met
 165 170 175
 Phe Thr Tyr Gly Cys Thr Trp Glu Phe Gly Ala Met Val Asn Tyr Ile
 180 185 190
 Lys Lys Thr Tyr Pro Leu Thr Gln Leu Val Val Val Gly Phe Ser Leu
 195 200 205
 Gly Gly Asn Ile Val Cys Lys Tyr Leu Gly Glu Thr Gln Ala Asn Gln
 210 215 220
 Glu Lys Val Leu Cys Cys Val Ser Val Cys Gln Gly Tyr Ser Ala Leu
 225 230 235 240
 Arg Ala Gln Glu Thr Phe Met Gln Trp Asp Gln Cys Arg Arg Phe Tyr
 245 250 255
 Asn Phe Leu Met Ala Asp Asn Met Lys Lys Ile Ile Leu Ser His Arg
 260 265 270
 Gln Ala Leu Phe Gly Asp His Val Lys Lys Pro Gln Ser Leu Glu Asp
 275 280 285
 Thr Asp Leu Ser Arg Leu Tyr Thr Ala Thr Ser Leu Met Gln Ile Asp
 290 295 300
 Asp Asn Val Met Arg Lys Phe His Gly Tyr Asn Ser Leu Lys Glu Tyr
 305 310 315 320
 Tyr Glu Glu Glu Ser Cys Met Arg Tyr Leu His Arg Ile Tyr Val Pro
 325 330 335
 Leu Met Leu Val Asn Ala Ala Asp Asp Pro Leu Val His Glu Ser Leu
 340 345 350
 Leu Thr Ile Pro Lys Ser Leu Ser Glu Lys Arg Glu Asn Val Met Phe
 355 360 365
 Val Leu Pro Leu His Gly Gly His Leu Gly Phe Phe Glu Gly Ser Val
 370 375 380
 Leu Phe Pro Glu Pro Leu Thr Trp Met Asp Lys Leu Val Val Glu Tyr
 385 390 395 400
 Ala Asn Ala Ile Cys Gln Trp Glu Arg Asn Lys Leu Gln Cys Ser Asp
 405 410 415
 Thr Glu Gln Val Glu Ala Asp Leu Glu
 420 425

<210> 1137

<211> 1205

<212> PRT

<213> Homo sapiens

<400> 1137

Met Gly Leu Leu Leu Met Ile Leu Ala Ser Ala Val Leu Gly Ser Phe
 1 5 10 15
 Leu Thr Leu Leu Ala Gln Phe Phe Leu Leu Tyr Arg Arg Gln Pro Glu
 20 25 30
 Pro Pro Ala Asp Glu Ala Ala Arg Ala Gly Glu Gly Phe Arg Tyr Ile
 35 40 45
 Lys Pro Val Pro Gly Leu Leu Leu Arg Glu Tyr Leu Tyr Gly Gly Gly
 50 55 60
 Arg Asp Glu Glu Pro Ser Gly Ala Ala Pro Glu Gly Gly Ala Thr Pro
 65 70 75 80

Thr	Ala	Ala	Pro	Glu	Thr	Pro	Ala	Pro	Pro	Thr	Arg	Glu	Thr	Cys	Tyr	85	90	95
Phe	Leu	Asn	Ala	Thr	Ile	Leu	Phe	Leu	Phe	Arg	Glu	Leu	Arg	Asp	Thr	100	105	110
Ala	Leu	Thr	Arg	Arg	Trp	Val	Thr	Lys	Lys	Ile	Lys	Val	Glu	Phe	Glu	115	120	125
Glu	Leu	Leu	Gln	Thr	Lys	Thr	Ala	Gly	Arg	Leu	Leu	Glu	Gly	Leu	Ser	130	135	140
Leu	Arg	Asp	Val	Phe	Leu	Gly	Glu	Thr	Val	Pro	Phe	Ile	Lys	Thr	Ile	145	150	155
Arg	Leu	Val	Arg	Pro	Val	Val	Pro	Ser	Ala	Thr	Gly	Glu	Pro	Asp	Gly	165	170	175
Pro	Glu	Gly	Glu	Ala	Leu	Pro	Ala	Ala	Cys	Pro	Glu	Glu	Leu	Ala	Phe	180	185	190
Glu	Ala	Glu	Val	Glu	Tyr	Asn	Gly	Gly	Phe	His	Leu	Ala	Ile	Asp	Val	195	200	205
Asp	Leu	Val	Phe	Gly	Lys	Ser	Ala	Tyr	Leu	Phe	Val	Lys	Leu	Ser	Arg	210	215	220
Val	Val	Gly	Arg	Leu	Arg	Leu	Val	Phe	Thr	Arg	Val	Pro	Phe	Thr	His	225	230	235
Trp	Phe	Phe	Ser	Phe	Val	Glu	Asp	Pro	Leu	Ile	Asp	Phe	Glu	Val	Arg	245	250	255
Ser	Gln	Phe	Glu	Gly	Arg	Pro	Met	Pro	Gln	Leu	Thr	Ser	Ile	Ile	Val	260	265	270
Asn	Gln	Leu	Lys	Lys	Ile	Ile	Lys	Arg	Lys	His	Thr	Leu	Pro	Asn	Tyr	275	280	285
Lys	Ile	Arg	Phe	Lys	Pro	Phe	Phe	Pro	Tyr	Gln	Thr	Leu	Gln	Gly	Phe	290	295	300
Glu	Glu	Asp	Glu	Glu	His	Ile	His	Ile	Gln	Gln	Trp	Ala	Leu	Thr	Glu	305	310	315
Gly	Arg	Leu	Lys	Val	Thr	Leu	Leu	Glu	Cys	Ser	Arg	Leu	Leu	Ile	Phe	325	330	335
Gly	Ser	Tyr	Asp	Arg	Glu	Ala	Asn	Val	His	Cys	Thr	Leu	Glu	Leu	Ser	340	345	350
Ser	Ser	Val	Trp	Glu	Glu	Lys	Gln	Arg	Ser	Ser	Ile	Lys	Thr	Gly	Thr	355	360	365
Ile	Ser	Leu	Thr	Ala	Val	Phe	Met	Gly	Trp	His	Arg	Val	Ser	Glu	Ala	370	375	380
Phe	Pro	Gly	Leu	Trp	Tyr	Lys	Leu	Leu	Val	Asp	Leu	Pro	Phe	Trp	Gly	385	390	395
Leu	Glu	Asp	Gly	Gly	Pro	Leu	Leu	Thr	Ala	Pro	Leu	Gly	Ser	Ala	Leu	405	410	415
Val	Glu	Leu	Ile	Lys	Gly	Asn	Leu	Gln	Ser	Val	Gly	Leu	Thr	Leu	Arg	420	425	430
Leu	Val	Gln	Ser	Thr	Asp	Gly	Tyr	Ala	Gly	His	Val	Ile	Ile	Glu	Thr	435	440	445
Val	Ala	Pro	Asn	Ser	Pro	Ala	Ala	Ile	Ala	Asp	Leu	Gln	Arg	Gly	Asp	450	455	460
Arg	Leu	Ile	Ala	Ile	Gly	Gly	Val	Lys	Ile	Thr	Ser	Thr	Leu	Gln	Val	465	470	475
Leu	Lys	Leu	Ile	Lys	Gln	Ala	Gly	Asp	Arg	Val	Leu	Val	Tyr	Tyr	Glu	485	490	495
Arg	Pro	Val	Gly	Gln	Ser	Asn	Gln	Gly	Ala	Val	Leu	Gln	Asp	Asn	Phe	500	505	510
Gly	Gln	Leu	Glu	Glu	Asn	Phe	Leu	Ser	Ser	Ser	Cys	Gln	Ser	Gly	Tyr	515	520	525
Glu	Glu	Glu	Ala	Ala	Gly	Leu	Thr	Val	Asp	Thr	Glu	Ser	Arg	Glu	Leu	530	535	540
Asp	Ser	Glu	Phe	Glu	Asp	Leu	Ala	Ser	Asp	Val	Arg	Ala	Gln	Asn	Glu	545	550	555
Phe	Lys	Asp	Glu	Ala	Gln	Ser	Leu	Ser	His	Ser	Pro	Lys	Arg	Val	Pro	565	570	575
Thr	Thr	Leu	Ser	Ile	Lys	Pro	Leu	Gly	Ala	Ile	Ser	Pro	Val	Leu	Asn	580	585	590

Arg Lys Leu Ala Val Gly Ser His Pro Leu Pro Pro Lys Ile Gln Ser
 595 600 605
 Lys Asp Gly Asn Lys Pro Pro Pro Leu Lys Thr Ser Glu Ile Thr Asp
 610 615 620
 Pro Ala Gln Val Ser Lys Pro Thr Gln Gly Ser Ala Phe Lys Pro Pro
 625 630 635 640
 Val Pro Pro Arg Pro Gln Ala Lys Val Pro Leu Pro Ser Ala Asp Ala
 645 650 655
 Pro Asn Gln Ala Glu Pro Asp Val Leu Val Glu Lys Pro Glu Lys Val
 660 665 670
 Val Pro Pro Pro Leu Val Asp Lys Ser Ala Glu Lys Gln Ala Lys Asn
 675 680 685
 Val Asp Ala Ile Asp Asp Ala Ala Pro Lys Gln Phe Leu Ala Lys
 690 695 700
 Gln Glu Val Ala Lys Asp Val Thr Ser Glu Thr Ser Cys Pro Thr Lys
 705 710 715 720
 Asp Ser Ser Asp Asp Arg Gln Thr Trp Glu Ser Ser Glu Ile Leu Tyr
 725 730 735
 Arg Asn Lys Leu Gly Lys Trp Thr Arg Thr Arg Ala Ser Cys Leu Phe
 740 745 750
 Asp Ile Glu Ala Cys His Arg Tyr Leu Asn Ile Ala Leu Trp Cys Arg
 755 760 765
 Asp Pro Phe Lys Leu Gly Gly Leu Ile Cys Leu Gly His Val Ser Leu
 770 775 780
 Lys Leu Glu Asp Val Ala Leu Gly Cys Leu Ala Thr Ser Asn Thr Glu
 785 790 795 800
 Tyr Leu Ser Lys Leu Arg Leu Glu Ala Pro Ser Pro Lys Ala Ile Val
 805 810 815
 Thr Arg Thr Ala Leu Arg Asn Leu Ser Met Gln Lys Gly Phe Asn Asp
 820 825 830
 Lys Phe Cys Tyr Gly Asp Ile Thr Ile His Phe Lys Tyr Leu Lys Glu
 835 840 845
 Gly Glu Ser Asp His His Val Val Thr Asn Val Glu Lys Glu Lys Glu
 850 855 860
 Pro His Leu Val Glu Glu Val Ser Val Leu Pro Lys Glu Glu Gln Phe
 865 870 875 880
 Val Gly Gln Met Gly Leu Thr Glu Asn Lys His Ser Phe Gln Asp Thr
 885 890 895
 Gln Phe Gln Asn Pro Thr Trp Cys Asp Tyr Cys Lys Lys Lys Val Trp
 900 905 910
 Thr Lys Ala Ala Ser Gln Cys Met Phe Cys Ala Tyr Val Cys His Lys
 915 920 925
 Lys Cys Gln Glu Lys Cys Leu Ala Glu Thr Ser Val Cys Gly Ala Thr
 930 935 940
 Asp Arg Arg Ile Asp Arg Thr Leu Lys Asn Leu Arg Leu Glu Gly Gln
 945 950 955 960
 Glu Thr Leu Leu Gly Leu Pro Pro Arg Val Asp Ala Glu Ala Ser Lys
 965 970 975
 Ser Val Asn Lys Thr Thr Gly Leu Thr Arg His Ile Ile Asn Thr Ser
 980 985 990
 Ser Arg Leu Leu Asn Leu Arg Gln Val Ser Lys Thr Arg Leu Ser Glu
 995 1000 1005
 Pro Gly Thr Asp Leu Val Glu Pro Ser Pro Lys His Thr Pro Asn Thr
 1010 1015 1020
 Ser Asp Asn Glu Gly Ser Asp Thr Glu Val Cys Gly Pro Asn Ser Pro
 1025 1030 1035 1040
 Ser Lys Arg Gly Asn Ser Thr Gly Ile Lys Leu Val Arg Lys Glu Gly
 1045 1050 1055
 Gly Leu Asp Asp Ser Val Phe Ile Ala Val Lys Glu Ile Gly Arg Asp
 1060 1065 1070
 Leu Tyr Arg Gly Leu Pro Thr Glu Glu Arg Ile Gln Lys Leu Glu Phe
 1075 1080 1085
 Met Leu Asp Lys Leu Gln Asn Glu Ile Asp Gln Glu Leu Glu His Asn
 1090 1095 1100

```

Asn Ser Leu Val Arg Glu Glu Lys Glu Thr Thr Asp Thr Arg Lys Lys
1105          1110          1115          1120
Ser Leu Leu Ser Ala Ala Leu Ala Lys Ser Gly Glu Arg Leu Gln Ala
          1125          1130          1135
Leu Thr Leu Leu Met Ile His Tyr Arg Ala Gly Ile Glu Asp Ile Glu
          1140          1145          1150
Thr Leu Glu Ser Leu Ser Leu Asp Gln His Ser Lys Lys Ile Ser Lys
          1155          1160          1165
Tyr Thr Asp Asp Thr Glu Glu Asp Leu Asp Asn Glu Ile Ser Gln Leu
          1170          1175          1180
Ile Asp Ser Gln Pro Phe Ser Ser Ile Ser Asp Asp Leu Phe Gly Pro
1185          1190          1195          1200
Ser Glu Ser Val *
          1204

```

```

<210> 1138
<211> 30
<212> PRT
<213> Homo sapiens

```

```

<400> 1138
Met Ala Ala Ala Gly Ala Gly Arg Leu Arg Arg Val Ala Ser Ala Leu
 1          5          10          15
Leu Leu Arg Ser Pro Arg Leu Pro Ala Arg Glu Leu Ser Ala
          20          25          30

```

```

<210> 1139
<211> 340
<212> PRT
<213> Homo sapiens

```

```

<400> 1139
Met Arg Lys Glu Leu Gln Leu Ser Leu Ser Val Thr Leu Leu Leu Val
 1          5          10          15
Cys Gly Phe Leu Tyr Gln Phe Thr Leu Lys Ser Ser Cys Leu Phe Cys
          20          25          30
Leu Pro Ser Phe Lys Ser His Gln Gly Leu Glu Ala Leu Leu Ser His
          35          40          45
Arg Arg Gly Ile Val Phe Leu Glu Thr Ser Glu Arg Met Glu Pro Pro
          50          55          60
His Leu Val Ser Cys Ser Val Glu Ser Ala Ala Lys Ile Tyr Pro Glu
          65          70          75          80
Trp Pro Val Val Phe Phe Met Lys Gly Leu Thr Asp Ser Thr Pro Met
          85          90          95
Pro Ser Asn Ser Thr Tyr Pro Ala Phe Ser Phe Leu Ser Ala Ile Asp
          100          105          110
Asn Val Phe Leu Phe Pro Leu Asp Met Lys Arg Leu Leu Glu Asp Thr
          115          120          125
Pro Leu Phe Ser Trp Tyr Asn Gln Ile Asn Ala Ser Ala Glu Arg Asn
          130          135          140
Trp Leu His Ile Ser Ser Asp Ala Ser Arg Leu Ala Ile Ile Trp Lys
          145          150          155          160
Tyr Gly Gly Ile Tyr Met Asp Thr Asp Val Ile Ser Ile Arg Pro Ile
          165          170          175
Pro Glu Glu Asn Phe Leu Ala Ala Gln Ala Ser Arg Tyr Ser Ser Asn
          180          185          190
Gly Ile Phe Gly Phe Leu Pro His Pro Phe Leu Trp Glu Cys Met
          195          200          205

```

Glu Asn Phe Val Glu His Tyr Asn Ser Ala Ile Trp Gly Asn Gln Gly
 210 215 220
 Pro Glu Leu Met Thr Arg Met Leu Arg Val Trp Cys Lys Leu Glu Asp
 225 230 235 240
 Phe Gln Glu Val Ser Asp Leu Arg Cys Leu Asn Ile Ser Phe Leu His
 245 250 255
 Pro Gln Arg Phe Tyr Pro Ile Ser Tyr Arg Glu Trp Arg Arg Tyr Tyr
 260 265 270
 Glu Val Trp Asp Thr Glu Pro Ser Phe Asn Val Ser Tyr Ala Leu His
 275 280 285
 Leu Trp Asn His Met Asn Gln Glu Gly Arg Ala Val Ile Arg Gly Ser
 290 295 300
 Asn Thr Leu Val Glu Asn Leu Tyr Arg Lys His Cys Pro Arg Thr Tyr
 305 310 315 320
 Arg Asp Leu Ile Lys Gly Pro Glu Gly Ser Val Thr Gly Glu Leu Gly
 325 330 335
 Pro Gly Asn Lys
 340

<210> 1140
 <211> 248
 <212> PRT
 <213> Homo sapiens

<400> 1140
 Met Ala Ala Gly Met Tyr Leu Glu His Tyr Leu Asp Ser Ile Glu Asn
 1 5 10 15
 Leu Pro Phe Glu Leu Gln Arg Asn Phe Gln Leu Met Arg Asp Leu Asp
 20 25 30
 Gln Arg Thr Glu Asp Leu Lys Ala Glu Ile Asp Lys Leu Ala Thr Glu
 35 40 45
 Tyr Met Ser Ser Ala Arg Ser Leu Ser Ser Glu Glu Lys Leu Ala Leu
 50 55 60
 Leu Lys Gln Ile Gln Glu Ala Tyr Gly Lys Cys Lys Glu Phe Gly Asp
 65 70 75 80
 Asp Lys Val Gln Leu Ala Met Gln Thr Tyr Glu Met Val Asp Lys His
 85 90 95
 Ile Arg Arg Leu Asp Thr Asp Leu Ala Arg Phe Glu Ala Asp Leu Lys
 100 105 110
 Glu Lys Gln Ile Glu Ser Ser Asp Tyr Asp Ser Ser Ser Ser Lys Gly
 115 120 125
 Lys Lys Ser Arg Thr Gln Lys Glu Lys Lys Ala Ala Arg Ala Arg Ser
 130 135 140
 Lys Gly Lys Asn Ser Asp Glu Glu Ala Pro Lys Thr Ala Gln Lys Lys
 145 150 155 160
 Leu Lys Leu Val Arg Thr Ser Pro Glu Tyr Gly Met Pro Ser Val Thr
 165 170 175
 Phe Gly Ser Val His Pro Ser Asp Val Leu Asp Met Pro Val Asp Pro
 180 185 190
 Asn Glu Pro Thr Tyr Cys Leu Cys His Gln Val Ser Tyr Gly Glu Met
 195 200 205
 Ile Gly Cys Asp Asn Pro Asp Cys Ser Ile Glu Trp Phe His Phe Ala
 210 215 220
 Cys Val Gly Leu Thr Thr Lys Pro Arg Gly Lys Trp Phe Cys Pro Arg
 225 230 235 240
 Cys Ser Gln Glu Arg Lys Lys Lys
 245 248

<210> 1141

<211> 872
 <212> PRT
 <213> Homo sapiens

<400> 1141
 Met Val Ala Val Arg Ala Ala Gly Pro Arg Glu Gly Ala Ser Gln Asp
 1 5 10 15
 Glu Ala Gly Thr Val Trp Ala Pro Met Thr Gly Cys Pro Cys Gln Cys
 20 25 30
 Arg Pro Gly Pro Ser Trp Leu Leu Val Asp Thr Leu Glu Pro Glu Thr
 35 40 45
 Ala Tyr Pro Val Gln Arg Pro Gly Pro Glu Gln Ala Gly Asn Gln Arg
 50 55 60
 Leu Gln Met Lys Arg Ala Gln Phe Gly Pro His Asp Trp Leu Ser Leu
 65 70 75 80
 Pro Val Pro Pro Gly Pro Ser Trp Leu Leu Val Asp Thr Leu Glu Pro
 85 90 95
 Glu Thr Ala Tyr Gln Phe Ser Val Leu Ala Gln Asn Lys Leu Gly Thr
 100 105 110
 Ser Ala Phe Ser Glu Val Val Thr Val Asn Thr Leu Ala Phe Pro Ile
 115 120 125
 Thr Thr Pro Glu Pro Leu Val Leu Val Thr Pro Pro Arg Cys Leu Ile
 130 135 140
 Ala Asn Arg Thr Gln Gln Gly Val Leu Leu Ser Trp Leu Pro Pro Ala
 145 150 155 160
 Asn His Ser Phe Pro Ile Asp Arg Tyr Ile Met Glu Phe Arg Val Ala
 165 170 175
 Glu Arg Trp Glu Leu Leu Asp Asp Gly Ile Pro Gly Thr Glu Gly Glu
 180 185 190
 Phe Phe Ala Lys Asp Leu Ser Gln Asp Thr Trp Tyr Glu Phe Arg Val
 195 200 205
 Leu Ala Val Met Gln Asp Leu Ile Ser Glu Pro Ser Asn Ile Ala Gly
 210 215 220
 Val Ser Ser Thr Asp Ile Phe Pro Gln Pro Asp Leu Thr Glu Asp Gly
 225 230 235 240
 Leu Ala Arg Pro Val Leu Ala Gly Ile Val Ala Thr Ile Cys Phe Leu
 245 250 255
 Ala Ala Ala Ile Leu Phe Ser Thr Leu Ala Ala Cys Phe Val Asn Lys
 260 265 270
 Gln Arg Lys Arg Lys Leu Lys Arg Lys Lys Asp Pro Pro Leu Ser Ile
 275 280 285
 Thr His Cys Arg Lys Ser Leu Glu Ser Pro Leu Ser Ser Gly Lys Val
 290 295 300
 Ser Pro Glu Ser Ile Arg Thr Leu Arg Ala Pro Ser Glu Ser Ser Asp
 305 310 315 320
 Asp Gln Gly Gln Pro Ala Ala Lys Arg Met Leu Ser Pro Thr Arg Glu
 325 330 335
 Lys Glu Leu Ser Leu Tyr Lys Lys Thr Lys Arg Ala Ile Ser Ser Lys
 340 345 350
 Lys Tyr Ser Val Ala Lys Ala Glu Ala Glu Ala Glu Ala Thr Thr Pro
 355 360 365
 Ile Glu Leu Ile Ser Arg Gly Pro Asp Gly Arg Phe Val Met Asp Pro
 370 375 380
 Ala Glu Met Glu Pro Ser Leu Lys Ser Arg Arg Ile Glu Gly Phe Pro
 385 390 395 400
 Phe Ala Glu Glu Thr Asp Met Tyr Pro Glu Phe Arg Gln Ser Asp Glu
 405 410 415
 Glu Asn Glu Asp Pro Leu Val Pro Thr Ser Val Ala Ala Leu Lys Ser
 420 425 430
 Gln Leu Thr Pro Leu Ser Ser Ser Gln Glu Ser Tyr Leu Pro Pro Pro
 435 440 445
 Ala Tyr Ser Pro Arg Phe Gln Pro Arg Gly Leu Glu Gly Pro Gly Gly
 450 455 460

```

Leu Glu Gly Arg Leu Gln Ala Thr Gly Gln Ala Arg Pro Pro Ala Pro
465                               470                               475                               480
Arg Pro Phe His His Gly Gln Tyr Tyr Gly Tyr Leu Ser Ser Ser Ser
                               485                               490                               495
Pro Gly Glu Val Glu Pro Pro Pro Phe Tyr Val Pro Glu Val Gly Ser
                               500                               505                               510
Pro Leu Ser Ser Val Met Ser Ser Pro Pro Leu Pro Thr Glu Gly Pro
                               515                               520                               525
Phe Gly His Pro Thr Ile Pro Glu Glu Asn Gly Glu Asn Ala Ser Asn
530                               535                               540
Ser Thr Leu Pro Leu Thr Gln Thr Pro Thr Gly Gly Arg Ser Pro Glu
545                               550                               555                               560
Pro Trp Gly Arg Pro Glu Phe Pro Phe Gly Gly Leu Glu Thr Pro Ala
                               565                               570                               575
Met Met Phe Pro His Gln Leu Pro Pro Cys Asp Val Pro Glu Ser Leu
580                               585                               590
Gln Pro Lys Ala Gly Leu Pro Arg Gly Leu Pro Pro Thr Ser Leu Gln
595                               600                               605
Val Pro Ala Ala Tyr Pro Gly Ile Leu Ser Leu Glu Ala Pro Lys Gly
610                               615                               620
Trp Ala Gly Lys Ser Pro Gly Arg Gly Pro Val Pro Ala Pro Pro Ala
625                               630                               635                               640
Ala Lys Trp Gln Asp Arg Pro Met Gln Pro Leu Val Ser Gln Gly Gln
645                               650                               655
Leu Arg His Thr Ser Gln Gly Met Gly Ile Pro Val Leu Pro Tyr Pro
660                               665                               670
Glu Pro Ala Glu Pro Gly Ala His Gly Gly Pro Ser Thr Phe Gly Leu
675                               680                               685
Asp Thr Arg Trp Tyr Glu Pro Gln Pro Arg Pro Arg Pro Ser Pro Arg
690                               695                               700
Gln Ala Arg Arg Ala Glu Pro Ser Leu His Gln Val Val Leu Gln Pro
705                               710                               715                               720
Ser Arg Leu Ser Pro Leu Thr Gln Ser Pro Leu Ser Ser Arg Thr Gly
725                               730                               735
Ser Pro Glu Leu Ala Ala Arg Ala Arg Pro Arg Pro Gly Leu Leu Gln
740                               745                               750
Gln Ala Glu Met Ser Glu Ile Thr Leu Gln Pro Pro Ala Ala Val Ser
755                               760                               765
Phe Ser Arg Lys Ser Thr Pro Ser Thr Gly Ser Pro Ser Gln Ser Ser
770                               775                               780
Arg Ser Gly Ser Pro Ser Tyr Arg Pro Ala Met Gly Phe Thr Thr Leu
785                               790                               795                               800
Ala Thr Gly Tyr Pro Ser Pro Pro Pro Gly Pro Ala Pro Ala Gly Pro
805                               810                               815
Gly Asp Ser Leu Asp Val Phe Gly Gln Thr Pro Ser Pro Arg Arg Thr
820                               825                               830
Gly Glu Glu Leu Leu Arg Pro Glu Thr Pro Pro Pro Thr Leu Pro Thr
835                               840                               845
Ser Gly Lys Leu Arg Arg Asp Arg Pro Ala Pro Ala Thr Ser Pro Pro
850                               855                               860
Glu Arg Ala Leu Ser Lys Leu *
865                               870 871

```

<210> 1142

<211> 273

<212> PRT

<213> Homo sapiens

<400> 1142

```

Met Ser Leu Thr Asn Thr Lys Thr Gly Phe Ser Val Lys Asp Ile Leu
1           5           10           15

```

Asp Leu Pro Asp Thr Asn Asp Glu Glu Gly Ser Val Ala Glu Gly Pro
 20 25 30
 Glu Glu Glu Asn Glu Gly Pro Glu Pro Ala Lys Arg Ala Gly Pro Leu
 35 40 45
 Gly Gln Gly Ala Leu Asp Ala Val Gln Ser Leu Pro Leu Lys Asn Pro
 50 55 60
 Phe Tyr Asp Ser Ser Asp Asn Pro Tyr Thr Arg Trp Leu Ala Ser Thr
 65 70 75 80
 Glu Gly Leu Gln Tyr Ser Leu His Gly Leu Ala Ala Gly Ala Pro Pro
 85 90 95
 Gln Asp Ser Ser Ser Lys Ser Pro Glu Pro Ser Ala Asp Glu Ser Pro
 100 105 110
 Asp Asn Asp Lys Glu Thr Pro Gly Gly Gly Gly Asp Ala Gly Lys Lys
 115 120 125
 Arg Lys Arg Arg Val Leu Phe Ser Lys Ala Gln Thr Tyr Glu Leu Glu
 130 135 140
 Arg Arg Phe Arg Gln Gln Arg Tyr Leu Ser Ala Pro Glu Arg Glu His
 145 150 155 160
 Leu Ala Ser Leu Ile Arg Leu Thr Pro Thr Gln Val Lys Ile Trp Phe
 165 170 175
 Gln Asn His Arg Tyr Lys Met Lys Arg Ala Arg Ala Glu Lys Gly Met
 180 185 190
 Glu Val Thr Pro Leu Pro Ser Pro Arg Arg Val Ala Val Pro Val Leu
 195 200 205
 Val Arg Asp Gly Lys Pro Cys His Ala Leu Lys Ala Gln Asp Leu Ala
 210 215 220
 Ala Ala Thr Phe Gln Ala Gly Ile Pro Phe Ser Ala Tyr Ser Ala Gln
 225 230 235 240
 Ser Leu Gln His Met Gln Tyr Asn Ala Gln Tyr Ser Ser Ala Ser Thr
 245 250 255
 Pro Gln Tyr Pro Thr Ala His Pro Leu Val Gln Ala Gln Gln Trp Thr
 260 265 270
 Trp
 273

<210> 1143
 <211> 59
 <212> PRT
 <213> Homo sapiens

<400> 1143
 Met Thr Arg Gly Asn Gln Arg Glu Leu Ala Arg Gln Lys Asn Met Lys
 1 5 10 15
 Lys Gln Ser Asp Ser Val Lys Gly Lys Arg Arg Asp Asp Gly Leu Ser
 20 25 30
 Ala Ala Ala Arg Lys Gln Arg Asp Ser Glu Ile Met Gln Gln Lys Gln
 35 40 45
 Lys Lys Ala Asn Glu Lys Lys Glu Glu Pro Lys
 50 55 59

<210> 1144
 <211> 844
 <212> PRT
 <213> Homo sapiens

<400> 1144
 Met Ser Phe Pro Pro His Leu Asn Arg Pro Pro Met Gly Ile Pro Ala
 1 5 10 15

Leu Pro Pro Gly Ile Pro Pro Pro Gln Phe Pro Gly Phe Pro Pro Pro
 20 25 30
 Val Pro Pro Gly Thr Pro Met Ile Pro Val Pro Met Ser Ile Met Ala
 35 40 45
 Pro Ala Pro Thr Val Leu Val Pro Thr Val Ser Met Val Gly Lys His
 50 55 60
 Leu Gly Ala Arg Lys Asp His Pro Gly Leu Lys Ala Lys Glu Asn Asp
 65 70 75 80
 Glu Asn Cys Gly Pro Thr Thr Thr Val Phe Val Gly Asn Ile Ser Glu
 85 90 95
 Lys Ala Ser Asp Met Leu Ile Arg Gln Leu Leu Ala Lys Cys Gly Leu
 100 105 110
 Val Leu Ser Trp Lys Arg Val Gln Gly Ala Ser Gly Lys Leu Gln Ala
 115 120 125
 Phe Gly Phe Cys Glu Tyr Lys Glu Pro Glu Ser Thr Leu Arg Ala Leu
 130 135 140
 Arg Leu Leu His Asp Leu Gln Ile Gly Glu Lys Lys Leu Leu Val Lys
 145 150 155 160
 Val Asp Ala Lys Thr Lys Ala Gln Leu Asp Glu Trp Lys Ala Lys Lys
 165 170 175
 Lys Ala Ser Asn Gly Asn Ala Arg Pro Glu Thr Val Thr Asn Asp Asp
 180 185 190
 Glu Glu Ala Leu Asp Glu Glu Thr Lys Arg Arg Asp Gln Met Ile Lys
 195 200 205
 Gly Ala Ile Glu Val Leu Ile Arg Glu Tyr Ser Ser Glu Leu Asn Ala
 210 215 220
 Pro Ser Gln Glu Ser Asp Ser His Pro Arg Lys Lys Lys Glu Lys
 225 230 235 240
 Lys Glu Asp Ile Phe Arg Arg Phe Pro Val Ala Pro Leu Ile Pro Tyr
 245 250 255
 Pro Leu Ile Thr Lys Glu Asp Ile Asn Ala Ile Glu Met Glu Glu Asp
 260 265 270
 Lys Arg Asp Leu Ile Ser Arg Glu Ile Ser Lys Phe Arg Asp Thr His
 275 280 285
 Lys Lys Leu Glu Glu Glu Lys Gly Lys Lys Glu Lys Glu Arg Gln Glu
 290 295 300
 Ile Glu Lys Glu Arg Arg Glu Arg Glu Arg Glu Arg Glu Arg Glu Arg
 305 310 315 320
 Glu Arg Arg Glu Arg Glu Arg Glu Arg Glu Arg Glu Arg Glu Arg Glu
 325 330 335
 Lys Glu Lys Glu Arg Glu Arg Glu Arg Glu Arg Asp Arg Asp Arg Asp
 340 345 350
 Arg Thr Lys Glu Arg Asp Arg Asp Arg Asp Arg Glu Arg Asp Arg Asp
 355 360 365
 Arg Asp Arg Glu Arg Ser Ser Asp Arg Asn Lys Asp Arg Ser Arg Ser
 370 375 380
 Arg Glu Lys Ser Arg Asp Arg Glu Arg Glu Arg Glu Arg Glu Arg Glu
 385 390 395 400
 Arg Glu Arg Glu Arg Glu Arg Glu Arg Glu Arg Glu Arg Glu Arg Glu
 405 410 415
 Arg Glu Arg Glu Arg Glu Arg Glu Arg Glu Lys Asp Lys Lys Arg Asp
 420 425 430
 Arg Glu Glu Asp Glu Glu Asp Ala Tyr Glu Arg Arg Lys Leu Glu Arg
 435 440 445
 Lys Leu Arg Glu Lys Glu Ala Ala Tyr Gln Glu Arg Leu Lys Asn Trp
 450 455 460
 Glu Ile Arg Glu Arg Lys Lys Thr Arg Glu Tyr Glu Lys Glu Ala Glu
 465 470 475 480
 Arg Glu Glu Glu Arg Arg Arg Glu Met Ala Lys Glu Ala Lys Arg Leu
 485 490 495
 Lys Glu Phe Leu Glu Asp Tyr Asp Asp Arg Asp Asp Pro Lys Tyr
 500 505 510
 Tyr Arg Gly Ser Ala Leu Gln Lys Arg Leu Arg Asp Arg Glu Lys Glu
 515 520 525


```

Met Glu Ala Asp Glu Arg Asp Arg Lys Arg Glu Lys Glu Glu Leu Glu
 530                               535                               540
Glu Ile Arg Gln Arg Leu Leu Ala Glu Gly His Pro Asp Pro Asp Ala
545                               550                               555                               560
Glu Leu Gln Arg Met Glu Gln Glu Ala Glu Arg Arg Arg Gln Pro Gln
                               565                               570                               575
Ile Lys Gln Glu Pro Glu Ser Glu Glu Glu Glu Glu Lys Gln Glu
                               580                               585                               590
Lys Glu Glu Lys Arg Glu Glu Pro Met Glu Glu Glu Glu Glu Pro Glu
                               595                               600                               605
Gln Lys Pro Cys Leu Lys Pro Thr Leu Arg Pro Ile Ser Ser Ala Pro
610                               615                               620
Ser Val Ser Ser Ala Ser Gly Asn Ala Thr Pro Asn Thr Pro Gly Asp
625                               630                               635                               640
Glu Ser Pro Cys Gly Ile Ile Ile Pro His Glu Asn Ser Pro Asp Gln
                               645                               650                               655
Gln Gln Pro Glu Glu His Arg Pro Lys Ile Gly Leu Ser Leu Lys Leu
660                               665                               670
Gly Ala Ser Asn Ser Pro Gly Gln Pro Asn Ser Val Lys Arg Lys Lys
675                               680                               685
Leu Pro Val Asp Ser Val Phe Asn Lys Phe Glu Asp Glu Asp Ser Asp
690                               695                               700
Asp Val Pro Arg Lys Arg Lys Leu Val Pro Leu Asp Tyr Gly Glu Asp
705                               710                               715                               720
Asp Lys Asn Ala Thr Lys Gly Thr Val Asn Thr Glu Glu Lys Arg Lys
725                               730                               735
His Ile Lys Ser Leu Ile Glu Lys Ile Pro Thr Ala Lys Pro Glu Leu
740                               745                               750
Phe Ala Tyr Pro Leu Asp Trp Ser Ile Val Asp Ser Ile Leu Met Glu
755                               760                               765
Arg Arg Ile Arg Pro Trp Ile Asn Lys Lys Ile Ile Glu Tyr Ile Gly
770                               775                               780
Glu Glu Glu Ala Thr Leu Val Asp Phe Val Cys Ser Lys Val Met Ala
785                               790                               795                               800
His Ser Ser Pro Gln Ser Ile Leu Asp Asp Val Ala Met Val Leu Asp
805                               810                               815
Glu Glu Ala Glu Val Phe Ile Val Lys Met Trp Arg Leu Leu Ile Tyr
820                               825                               830
Glu Thr Glu Ala Lys Lys Ile Gly Leu Val Lys *
835                               840                               843

```

<210> 1145
 <211> 185
 <212> PRT
 <213> Homo sapiens

```

<400> 1145
Met Thr Thr Pro Asn Lys Thr Pro Pro Gly Ala Asp Pro Lys Gln Leu
 1                               5                               10                               15
Glu Arg Thr Gly Thr Val Arg Glu Ile Gly Ser Gln Ala Val Trp Ser
20                               25                               30
Leu Ser Ser Cys Lys Pro Gly Phe Gly Val Asp Gln Leu Arg Asp Asp
35                               40                               45
Asn Leu Glu Thr Tyr Trp Gln Ser Asp Gly Ser Gln Pro His Leu Val
50                               55                               60
Asn Ile Gln Phe Arg Arg Lys Thr Thr Val Lys Thr Leu Cys Ile Tyr
65                               70                               75                               80
Ala Asp Tyr Lys Ser Asp Glu Ser Tyr Thr Pro Ser Lys Ile Ser Val
85                               90                               95
Arg Val Gly Asn Asn Phe His Asn Leu Gln Glu Ile Arg Gln Leu Glu
100                               105                               110

```

Leu Val Glu Pro Ser Gly Trp Ile His Val Pro Leu Thr Asp Asn His
 115 120 125
 Lys Lys Pro Thr Arg Thr Phe Met Ile Gln Ile Ala Val Leu Ala Asn
 130 135 140
 His Gln Asn Gly Arg Asp Thr His Met Arg Gln Ile Lys Ile Tyr Thr
 145 150 155 160
 Pro Val Glu Glu Ser Ser Ile Gly Lys Phe Pro Arg Cys Thr Thr Ile
 165 170 175
 Asp Phe Met Met Tyr Arg Ser Ile Arg
 180 185

<210> 1146
 <211> 388
 <212> PRT
 <213> Homo sapiens

<400> 1146
 Met Asn Thr Met Tyr Val Met Met Ala Gln Ile Leu Arg Ser His Leu
 1 5 10 15
 Ile Lys Ala Thr Val Ile Pro Asn Arg Val Lys Met Leu Pro Tyr Phe
 20 25 30
 Gly Ile Ile Arg Asn Arg Met Met Ser Thr His Lys Ser Lys Lys Lys
 35 40 45
 Ile Arg Glu Tyr Tyr Arg Leu Leu Asn Val Glu Glu Gly Cys Ser Ala
 50 55 60
 Asp Glu Val Arg Glu Ser Phe His Lys Leu Ala Lys Gln Tyr His Pro
 65 70 75 80
 Asp Ser Gly Ser Asn Thr Ala Asp Ser Ala Thr Phe Ile Arg Ile Glu
 85 90 95
 Lys Ala Tyr Arg Lys Val Leu Ser His Val Ile Glu Gln Thr Asn Ala
 100 105 110
 Ser Gln Ser Lys Gly Glu Glu Glu Asp Val Glu Lys Phe Lys Tyr
 115 120 125
 Lys Thr Pro Gln His Arg His Tyr Leu Ser Phe Glu Gly Ile Gly Phe
 130 135 140
 Gly Thr Pro Thr Gln Arg Glu Lys His Tyr Arg Gln Phe Arg Ala Asp
 145 150 155 160
 Arg Ala Ala Glu Gln Val Met Glu Tyr Gln Lys Gln Lys Leu Gln Ser
 165 170 175
 Gln Tyr Phe Pro Asp Ser Val Ile Val Lys Asn Ile Arg Gln Ser Lys
 180 185 190
 Gln Gln Lys Ile Thr Gln Ala Ile Glu Arg Leu Val Glu Asp Leu Ile
 195 200 205
 Gln Glu Ser Met Ala Lys Gly Asp Phe Asp Asn Leu Ser Gly Lys Gly
 210 215 220
 Lys Pro Leu Lys Lys Phe Ser Asp Cys Ser Tyr Ile Asp Pro Met Thr
 225 230 235 240
 His Asn Leu Asn Arg Ile Leu Ile Asp Asn Gly Tyr Gln Pro Glu Trp
 245 250 255
 Ile Leu Lys Gln Lys Glu Ile Ser Asp Thr Ile Glu Gln Leu Arg Glu
 260 265 270
 Ala Ile Leu Val Ser Arg Lys Lys Leu Gly Asn Pro Met Thr Pro Thr
 275 280 285
 Glu Lys Lys Gln Trp Asn His Val Cys Glu Gln Phe Gln Glu Asn Ile
 290 295 300
 Arg Lys Leu Asn Lys Arg Ile Asn Asp Phe Asn Leu Ile Val Pro Ile
 305 310 315 320
 Leu Thr Arg Gln Lys Val His Phe Asp Ala Gln Lys Glu Ile Val Arg
 325 330 335
 Ala Gln Lys Ile Tyr Glu Thr Leu Ile Lys Thr Lys Glu Val Thr Asp
 340 345 350

Arg Asn Pro Asn Asn Leu Asp Gln Gly Glu Gly Glu Lys Thr Pro Glu
 355 360 365
 Ile Lys Lys Gly Phe Leu Asn Trp Met Asn Leu Trp Lys Phe Ile Lys
 370 375 380
 Ile Arg Ser Phe
 385 388

<210> 1147
 <211> 639
 <212> PRT
 <213> Homo sapiens

<400> 1147
 Met Glu Ile Ile Arg Ser Asn Phe Lys Ser Asn Leu His Lys Val Tyr
 1 5 10 15
 Gln Ala Ile Glu Ala Asp Phe Phe Ala Ile Asp Gly Glu Phe Ser
 20 25 30
 Gly Ile Ser Asp Gly Pro Ser Val Ser Ala Leu Thr Asn Gly Phe Asp
 35 40 45
 Thr Pro Glu Glu Arg Tyr Gln Lys Leu Lys Lys His Ser Met Asp Phe
 50 55 60
 Leu Leu Phe Gln Phe Gly Leu Cys Thr Phe Lys Tyr Asp Tyr Thr Asp
 65 70 75 80
 Ser Lys Tyr Ile Thr Lys Ser Phe Asn Phe Tyr Val Phe Pro Lys Pro
 85 90 95
 Phe Asn Arg Ser Ser Pro Asp Val Lys Phe Val Cys Gln Ser Ser Ser
 100 105 110
 Ile Asp Phe Leu Ala Ser Gln Gly Phe Asp Phe Asn Lys Val Phe Arg
 115 120 125
 Asn Gly Ile Pro Tyr Leu Asn Gln Glu Glu Glu Arg Gln Leu Arg Glu
 130 135 140
 Gln Tyr Asp Glu Lys Arg Ser Gln Ala Asn Gly Ala Gly Ala Leu Ser
 145 150 155 160
 Tyr Val Ser Pro Asn Thr Ser Lys Cys Pro Val Thr Ile Pro Glu Asp
 165 170 175
 Gln Lys Lys Phe Ile Asp Gln Val Val Glu Lys Ile Glu Asp Leu Leu
 180 185 190
 Gln Ser Glu Glu Asn Lys Asn Leu Asp Leu Glu Pro Cys Thr Gly Phe
 195 200 205
 Gln Arg Lys Leu Ile Tyr Gln Thr Leu Ser Trp Lys Tyr Pro Lys Gly
 210 215 220
 Ile His Val Glu Thr Leu Glu Thr Glu Lys Lys Glu Arg Tyr Ile Val
 225 230 235 240
 Ile Ser Lys Val Asp Glu Glu Glu Arg Lys Arg Arg Glu Gln Gln Lys
 245 250 255
 His Ala Lys Glu Gln Glu Glu Leu Asn Asp Ala Val Gly Phe Ser Arg
 260 265 270
 Val Ile His Ala Ile Ala Asn Ser Gly Lys Leu Val Ile Gly His Asn
 275 280 285
 Met Leu Leu Asp Val Met His Thr Val His Gln Phe Tyr Cys Pro Leu
 290 295 300
 Pro Ala Asp Leu Ser Glu Phe Lys Glu Met Thr Thr Cys Val Phe Pro
 305 310 315 320
 Arg Leu Leu Asp Thr Lys Leu Met Ala Ser Thr Gln Pro Phe Lys Asp
 325 330 335
 Ile Ile Asn Asn Thr Ser Leu Ala Glu Leu Glu Lys Arg Leu Lys Glu
 340 345 350
 Thr Pro Phe Asn Pro Pro Lys Val Glu Ser Ala Glu Gly Phe Pro Ser
 355 360 365
 Tyr Asp Thr Ala Ser Glu Gln Leu His Glu Ala Gly Tyr Asp Ala Tyr
 370 375 380

```

Ile Thr Gly Leu Cys Phe Ile Ser Met Ala Asn Tyr Leu Gly Ser Phe
385                      390                      395                      400
Leu Ser Pro Pro Lys Ile His Val Ser Ala Arg Ser Lys Leu Ile Glu
                      405                      410                      415
Pro Phe Phe Asn Lys Leu Phe Leu Met Arg Val Met Asp Ile Pro Tyr
420                      425                      430
Leu Asn Leu Glu Gly Pro Asp Leu Gln Pro Lys Arg Asp His Val Leu
435                      440                      445
His Val Thr Phe Pro Lys Glu Trp Lys Thr Ser Asp Leu Tyr Gln Leu
450                      455                      460
Phe Ser Ala Phe Gly Asn Ile Gln Ile Ser Trp Ile Asp Asp Thr Ser
465                      470                      475                      480
Ala Phe Val Ser Leu Ser Gln Pro Glu Gln Val Lys Ile Ala Val Asn
                      485                      490                      495
Thr Ser Lys Tyr Ala Glu Ser Tyr Arg Ile Gln Thr Tyr Ala Glu Tyr
500                      505                      510
Met Gly Arg Lys Gln Glu Glu Lys Gln Ile Lys Arg Lys Trp Thr Glu
515                      520                      525
Asp Ser Trp Lys Glu Ala Asp Ser Lys Arg Leu Asn Pro Gln Cys Ile
530                      535                      540
Pro Tyr Thr Leu Gln Asn His Tyr Tyr Arg Asn Asn Ser Phe Thr Ala
545                      550                      555                      560
Pro Ser Thr Val Gly Lys Arg Asn Leu Ser Pro Ser Gln Glu Glu Ala
565                      570                      575
Gly Leu Glu Asp Gly Val Ser Gly Glu Ile Ser Asp Thr Glu Leu Glu
580                      585                      590
Gln Thr Asp Ser Cys Ala Glu Pro Leu Ser Glu Gly Arg Lys Lys Ala
595                      600                      605
Lys Lys Leu Lys Arg Met Lys Lys Glu Leu Ser Pro Ala Gly Ser Ile
610                      615                      620
Ser Lys Asn Ser Pro Ala Thr Leu Phe Glu Val Pro Asp Thr Trp
625                      630                      635                      639

```

<210> 1148
 <211> 474
 <212> PRT
 <213> Homo sapiens

```

<400> 1148
Met Ala Leu Ala Val Ala Pro Trp Gly Arg Gln Trp Glu Glu Ala Arg
1                      5                      10                      15
Ala Leu Gly Arg Ala Val Arg Met Leu Gln Arg Leu Glu Glu Gln Cys
20                      25                      30
Val Asp Pro Arg Leu Ser Val Ser Pro Pro Ser Leu Arg Asp Leu Leu
35                      40                      45
Pro Arg Thr Ala Gln Leu Leu Arg Glu Val Ala His Ser Arg Arg Ala
50                      55                      60
Ala Gly Gly Gly Gly Pro Gly Gly Pro Gly Gly Ser Gly Asp Phe Leu
65                      70                      75                      80
Leu Ile Tyr Leu Ala Asn Leu Glu Ala Lys Ser Arg Gln Val Ala Ala
85                      90                      95
Leu Leu Pro Leu Arg Gly Arg Arg Ser Ala Asn Asp Glu Leu Phe Arg
100                      105                      110
Ala Gly Ser Arg Leu Arg Arg Gln Leu Ala Lys Leu Ala Ile Ile Phe
115                      120                      125
Ser His Met His Ala Glu Leu His Ala Leu Phe Pro Gly Gly Lys Tyr
130                      135                      140
Cys Gly His Met Tyr Gln Leu Thr Lys Ala Pro Ala His Thr Phe Trp
145                      150                      155                      160
Arg Glu Ser Cys Gly Ala Arg Cys Val Leu Pro Trp Ala Glu Phe Glu
165                      170                      175

```

```

Ser Leu Leu Gly Thr Cys His Pro Val Glu Pro Gly Cys Thr Ala Leu
      180      185      190
Ala Leu Arg Thr Thr Ile Asp Leu Thr Cys Ser Gly His Val Ser Ile
      195      200      205
Phe Glu Phe Asp Val Phe Thr Arg Leu Phe Gln Pro Trp Pro Thr Leu
      210      215      220
Leu Lys Asn Trp Gln Leu Leu Ala Val Asn His Pro Gly Tyr Met Ala
      225      230      235      240
Phe Leu Thr Tyr Asp Glu Val Gln Glu Arg Leu Gln Ala Cys Arg Asp
      245      250      255
Lys Pro Gly Ser Tyr Ile Phe Arg Pro Ser Cys Thr Arg Leu Gly Gln
      260      265      270
Trp Ala Ile Gly Tyr Val Ser Ser Asp Gly Ser Ile Leu Gln Thr Ile
      275      280      285
Pro Ala Asn Lys Pro Leu Ser Gln Val Leu Leu Glu Gly Gln Lys Asp
      290      295      300
Gly Phe Tyr Leu Tyr Pro Asp Gly Lys Thr His Asn Pro Asp Leu Thr
      305      310      315      320
Glu Leu Gly Gln Ala Glu Pro Gln Gln Arg Ile His Val Ser Glu Glu
      325      330      335
Gln Leu Gln Leu Tyr Trp Ala Met Asp Ser Thr Phe Glu Leu Cys Lys
      340      345      350
Ile Cys Ala Glu Ser Asn Lys Asp Val Lys Ile Glu Pro Cys Gly His
      355      360      365
Leu Leu Cys Ser Cys Cys Leu Ala Ala Trp Gln His Ser Asp Ser Gln
      370      375      380
Thr Cys Pro Phe Cys Arg Cys Glu Ile Lys Gly Trp Glu Ala Val Ser
      385      390      395      400
Ile Tyr Gln Phe His Gly Gln Ala Thr Ala Glu Asp Ser Gly Asn Ser
      405      410      415
Ser Asp Gln Glu Gly Arg Glu Leu Glu Leu Gly Gln Val Pro Leu Ser
      420      425      430
Ala Pro Pro Leu Pro Pro Arg Pro Asp Leu Pro Pro Arg Lys Pro Arg
      435      440      445
Asn Ala Gln Pro Lys Val Arg Leu Leu Lys Gly Asn Ser Pro Pro Ala
      450      455      460
Ala Leu Gly Pro Gln Asp Pro Ala Pro Ala
      465      470      474

```

<210> 1149

<211> 1068

<212> PRT

<213> Homo sapiens

<400> 1149

```

Met Arg Asn Lys Lys His Ser Asn Asn Trp Leu Ala Gln His Trp Phe
  1      5      10      15
Gln Ser Ser Ile Ile Leu Cys Phe Ser Pro Val Gly Arg Thr Leu Arg
      20      25      30
Val Arg Ala Arg Lys Phe Pro Ala Ile Val Asn Cys Thr Ala Ile Asp
      35      40      45
Trp Phe His Ala Trp Pro Gln Glu Ala Leu Val Ser Val Ser Arg Arg
      50      55      60
Phe Ile Glu Glu Thr Lys Gly Ile Glu Pro Val His Lys Asp Ser Ile
      65      70      75      80
Ser Leu Phe Met Ala His Val His Thr Thr Val Asn Glu Met Ser Thr
      85      90      95
Arg Tyr Tyr Gln Asn Glu Arg Arg His Asn Tyr Thr Thr Pro Lys Ser
      100      105      110
Phe Leu Glu Gln Ile Ser Leu Phe Lys Asn Leu Leu Lys Lys Lys Gln
      115      120      125

```

Asn	Glu	Val	Ser	Glu	Lys	Lys	Glu	Arg	Leu	Val	Asn	Gly	Ile	Gln	Lys
130						135					140				
Leu	Lys	Thr	Thr	Ala	Ser	Gln	Val	Gly	Asp	Leu	Lys	Ala	Arg	Leu	Ala
145					150					155					160
Ser	Gln	Glu	Ala	Glu	Leu	Gln	Leu	Arg	Asn	His	Asp	Ala	Glu	Ala	Leu
				165					170					175	
Ile	Thr	Lys	Ile	Gly	Leu	Gln	Thr	Glu	Lys	Val	Ser	Arg	Glu	Lys	Thr
			180					185					190		
Ile	Ala	Asp	Ala	Glu	Glu	Arg	Lys	Val	Thr	Ala	Ile	Gln	Thr	Glu	Val
		195				200						205			
Phe	Gln	Lys	Gln	Arg	Glu	Cys	Glu	Ala	Asp	Leu	Leu	Lys	Ala	Glu	Pro
210					215					220					
Ala	Leu	Val	Ala	Ala	Thr	Ala	Ala	Leu	Asn	Thr	Leu	Asn	Arg	Val	Asn
225					230					235					240
Leu	Ser	Glu	Leu	Lys	Ala	Phe	Pro	Asn	Pro	Pro	Ile	Ala	Val	Thr	Asn
				245					250					255	
Val	Thr	Ala	Ala	Val	Met	Val	Leu	Leu	Ala	Pro	Arg	Gly	Arg	Val	Pro
			260						265				270		
Lys	Asp	Arg	Ser	Trp	Lys	Ala	Ala	Lys	Val	Phe	Met	Gly	Lys	Val	Asp
		275				280						285			
Asp	Phe	Leu	Gln	Ala	Leu	Ile	Asn	Tyr	Asp	Lys	Glu	His	Ile	Pro	Glu
290					295					300					
Asn	Cys	Leu	Lys	Val	Val	Asn	Glu	His	Tyr	Leu	Lys	Asp	Pro	Glu	Phe
305					310					315					320
Asn	Pro	Asn	Leu	Ile	Arg	Thr	Lys	Ser	Phe	Ala	Ala	Ala	Gly	Leu	Cys
				325					330					335	
Ala	Trp	Val	Ile	Asn	Ile	Ile	Lys	Phe	Tyr	Glu	Val	Tyr	Cys	Asp	Val
			340					345					350		
Glu	Pro	Lys	Arg	Gln	Ala	Leu	Ala	Gln	Ala	Asn	Leu	Glu	Leu	Ala	Ala
		355				360						365			
Ala	Thr	Glu	Lys	Leu	Glu	Ala	Ile	Arg	Lys	Lys	Leu	Val	Val	Ser	Ala
		370				375					380				
Asn	Tyr	Asp	Ile	Glu	Lys	Ser	Glu	Lys	Ile	Arg	Trp	Gly	Gln	Ser	Ile
385					390					395					400
Lys	Ser	Phe	Glu	Ala	Gln	Glu	Lys	Thr	Leu	Cys	Gly	Asp	Val	Leu	Leu
			405						410					415	
Thr	Ala	Ala	Phe	Val	Ser	Tyr	Val	Gly	Pro	Phe	Thr	Arg	Gln	Tyr	Arg
			420					425					430		
Gln	Glu	Leu	Val	His	Cys	Lys	Trp	Val	Pro	Phe	Leu	Gln	Gln	Lys	Val
		435					440					445			
Ser	Ile	Pro	Leu	Thr	Glu	Gly	Leu	Asp	Leu	Ile	Ser	Met	Leu	Thr	Asp
		450				455					460				
Asp	Ala	Thr	Ile	Ala	Ala	Trp	Asn	Asn	Glu	Gly	Leu	Pro	Ser	Asp	Arg
465					470					475					480
Met	Ser	Thr	Glu	Asn	Ala	Ala	Ile	Leu	Thr	His	Cys	Glu	Arg	Trp	Pro
				485					490					495	
Leu	Val	Ile	Asp	Pro	Gln	Gln	Gln	Gly	Ile	Lys	Trp	Ile	Lys	Asn	Lys
			500					505					510		
Tyr	Gly	Met	Asp	Leu	Lys	Val	Thr	His	Leu	Gly	Gln	Lys	Gly	Phe	Leu
		515					520					525			
Asn	Ala	Ile	Glu	Thr	Ala	Leu	Ala	Phe	Gly	Asp	Val	Ile	Leu	Ile	Glu
		530				535					540				
Asn	Leu	Glu	Glu	Thr	Ile	Asp	Pro	Val	Leu	Asp	Pro	Leu	Leu	Gly	Arg
545					550					555					560
Asn	Thr	Ile	Lys	Lys	Gly	Lys	Tyr	Ile	Arg	Ile	Gly	Asp	Lys	Glu	Cys
				565					570					575	
Glu	Phe	Asn	Lys	Asn	Phe	Arg	Leu	Ile	Leu	His	Thr	Lys	Leu	Ala	Asn
			580					585					590		
Pro	His	Tyr	Lys	Pro	Glu	Leu	Gln	Ala	Gln	Thr	Thr	Leu	Leu	Asn	Phe
		595					600					605			
Thr	Val	Thr	Glu	Asp	Gly	Leu	Glu	Ala	Gln	Leu	Leu	Ala	Glu	Val	Val
		610				615					620				
Ser	Ile	Glu	Arg	Pro	Asp	Leu	Glu	Lys	Leu	Lys	Leu	Val	Leu	Thr	Lys
625					630					635					640

His Gln Asn Asp Phe Lys Ile Glu Leu Lys Tyr Leu Glu Asp Asp Leu
 645 650 655
 Leu Leu Arg Leu Ser Ala Ala Glu Gly Ser Phe Leu Asp Asp Thr Lys
 660 665 670
 Leu Val Glu Arg Leu Glu Ala Thr Lys Thr Thr Val Ala Glu Ile Glu
 675 680 685
 His Lys Val Ile Glu Ala Lys Glu Asn Glu Arg Lys Ile Asn Glu Ala
 690 695 700
 Arg Glu Cys Tyr Arg Pro Val Ala Ala Arg Ala Ser Leu Leu Tyr Phe
 705 710 715 720
 Val Ile Asn Asp Leu Gln Lys Ile Asn Pro Leu Tyr Gln Phe Ser Leu
 725 730 735
 Lys Ala Phe Asn Val Leu Phe His Arg Ala Ile Glu Gln Ala Asp Lys
 740 745 750
 Val Glu Asp Met Gln Gly Arg Ile Ser Ile Leu Met Glu Ser Ile Thr
 755 760 765
 His Ala Val Phe Leu Tyr Thr Ser Gln Ala Leu Phe Glu Lys Asp Lys
 770 775 780
 Leu Thr Phe Leu Ser Gln Met Ala Phe Gln Ile Leu Leu Arg Lys Lys
 785 790 795 800
 Glu Ile Asp Pro Leu Glu Leu Asp Phe Leu Leu Arg Phe Thr Val Glu
 805 810 815
 His Thr His Leu Ser Pro Val Asp Phe Leu Thr Ser Gln Ser Trp Ser
 820 825 830
 Ala Ile Lys Ala Ile Ala Val Met Glu Glu Phe Arg Gly Ile Asp Arg
 835 840 845
 Asp Val Glu Gly Ser Ala Lys Gln Trp Arg Lys Trp Val Glu Ser Glu
 850 855 860
 Cys Pro Glu Lys Glu Lys Leu Pro Gln Glu Trp Lys Lys Lys Ser Leu
 865 870 875 880
 Ile Gln Lys Leu Ile Leu Leu Arg Ala Met Arg Pro Asp Arg Met Thr
 885 890 895
 Tyr Ala Leu Arg Asn Phe Val Glu Glu Lys Leu Gly Ala Lys Tyr Val
 900 905 910
 Glu Arg Thr Arg Leu Asp Leu Val Lys Ala Phe Glu Glu Ser Ser Pro
 915 920 925
 Ala Thr Pro Ile Phe Phe Ile Leu Ser Pro Gly Val Asp Ala Leu Lys
 930 935 940
 Asp Leu Glu Ile Leu Gly Lys Arg Leu Gly Phe Thr Ile Asp Ser Gly
 945 950 955 960
 Lys Phe His Asn Val Ser Leu Gly Gln Gly Gln Glu Thr Val Ala Glu
 965 970 975
 Val Ala Leu Glu Lys Ala Ser Lys Gly Gly His Trp Val Ile Leu Gln
 980 985 990
 Asn Val His Leu Val Ala Lys Trp Leu Gly Thr Leu Glu Lys Leu Leu
 995 1000 1005
 Glu Arg Phe Ser Gln Gly Ser His Arg Asp Tyr Arg Val Phe Met Ser
 1010 1015 1020
 Ala Glu Ser Ala Pro Thr Pro Asp Glu His Ile Ile Pro Gln Gly Leu
 1025 1030 1035 1040
 Leu Glu Asn Ser Ile Lys Ile Thr Asn Glu Pro Pro Thr Gly Met Leu
 1045 1050 1055
 Ala Asn Leu His Ala Ala Leu Tyr Asn Phe Asp Gln
 1060 1065 1068

<210> 1150

<211> 117

<212> PRT

<213> Homo sapiens

<400> 1150

Met Leu Gly Leu Val Pro Gly Val Asp Gly Arg Ser Pro Arg Gly Gly
 1 5 10 15
 Arg Gly Gly Leu Gly Trp Arg Ser Cys Phe Leu Ser Asp Gly Glu Trp
 20 25 30
 Ile Leu Arg Thr Gly Ser Val Gly Ser Gly Leu Val Gly Ser Arg Gly
 35 40 45
 Ser Ala Gly Gly Pro Arg Leu Glu Met Asp Pro Asn Cys Ser Cys Ala
 50 55 60
 Thr Gly Gly Ser Cys Thr Cys Ala Gly Ser Cys Lys Cys Lys Glu Cys
 65 70 75 80
 Lys Cys Thr Ser Cys Lys Lys Ser Cys Cys Ser Cys Cys Pro Val Gly
 85 90 95
 Cys Ala Lys Cys Ala Gln Gly Cys Val Cys Lys Gly Ala Ser Glu Lys
 100 105 110
 Cys Ser Cys Cys Ala
 115 117

<210> 1151

<211> 953

<212> PRT

<213> Homo sapiens

<400> 1151

Met Glu Glu Gln Gly His Ser Glu Met Glu Ile Ile Pro Ser Glu Ser
 1 5 10 15
 His Pro His Ile Gln Leu Leu Lys Ser Asn Arg Glu Leu Leu Val Thr
 20 25 30
 His Ile Arg Asn Thr Gln Cys Leu Val Asp Asn Leu Leu Lys Asn Asp
 35 40 45
 Tyr Phe Ser Ala Glu Asp Ala Glu Ile Val Cys Ala Cys Pro Thr Gln
 50 55 60
 Pro Asp Lys Val Arg Lys Ile Leu Asp Leu Val Gln Ser Lys Gly Glu
 65 70 75 80
 Glu Val Ser Glu Phe Phe Leu Tyr Leu Leu Gln Gln Leu Ala Asp Ala
 85 90 95
 Tyr Val Asp Leu Arg Pro Trp Leu Leu Glu Ile Gly Phe Ser Pro Ser
 100 105 110
 Leu Leu Thr Gln Ser Lys Val Val Asn Thr Asp Pro Val Ser Arg
 115 120 125
 Tyr Thr Gln Gln Leu Arg His His Leu Gly Arg Asp Ser Lys Phe Val
 130 135 140
 Leu Cys Tyr Ala Gln Lys Glu Glu Leu Leu Leu Glu Glu Ile Tyr Met
 145 150 155 160
 Asp Thr Ile Met Glu Leu Val Gly Phe Ser Asn Glu Ser Leu Gly Ser
 165 170 175
 Leu Asn Ser Leu Ala Cys Leu Leu Asp His Thr Thr Gly Ile Leu Asn
 180 185 190
 Glu Gln Gly Glu Thr Ile Phe Ile Leu Gly Asp Ala Gly Val Gly Lys
 195 200 205
 Ser Met Leu Leu Gln Arg Leu Gln Ser Leu Trp Ala Thr Gly Arg Leu
 210 215 220
 Asp Ala Gly Val Lys Phe Phe His Phe Arg Cys Arg Met Phe Ser
 225 230 235 240
 Cys Phe Lys Glu Ser Asp Arg Leu Cys Leu Gln Asp Leu Leu Phe Lys
 245 250 255
 His Tyr Cys Tyr Pro Glu Arg Asp Pro Glu Glu Val Phe Ala Phe Leu
 260 265 270
 Leu Arg Phe Pro His Val Ala Leu Phe Thr Phe Asp Gly Leu Asp Glu
 275 280 285
 Leu His Ser Asp Leu Asp Leu Ser Arg Val Pro Asp Ser Ser Cys Pro
 290 295 300

Trp	Glu	Pro	Ala	His	Pro	Leu	Val	Leu	Leu	Ala	Asn	Leu	Leu	Ser	Gly	305	310	315	320
Lys	Leu	Leu	Lys	Gly	Ala	Ser	Lys	Leu	Leu	Thr	Ala	Arg	Thr	Gly	Ile	325	330	335	
Glu	Val	Pro	Arg	Gln	Phe	Leu	Arg	Lys	Val	Leu	Leu	Arg	Gly	Phe		340	345	350	
Ser	Pro	Ser	His	Leu	Arg	Ala	Tyr	Ala	Arg	Arg	Met	Phe	Pro	Glu	Arg	355	360	365	
Ala	Leu	Gln	Asp	Arg	Leu	Leu	Ser	Gln	Leu	Glu	Ala	Asn	Pro	Asn	Leu	370	375	380	
Cys	Ser	Leu	Cys	Ser	Val	Pro	Leu	Phe	Cys	Trp	Ile	Ile	Phe	Arg	Cys	385	390	395	400
Phe	Gln	His	Phe	Arg	Ala	Ala	Phe	Glu	Gly	Ser	Pro	Gln	Leu	Pro	Asp	405	410	415	
Cys	Thr	Met	Thr	Leu	Thr	Asp	Val	Phe	Leu	Leu	Val	Thr	Glu	Val	His	420	425	430	
Leu	Asn	Arg	Met	Gln	Pro	Ser	Ser	Leu	Val	Gln	Arg	Asn	Thr	Arg	Ser	435	440	445	
Pro	Val	Glu	Thr	Leu	His	Ala	Gly	Arg	Asp	Thr	Leu	Cys	Ser	Leu	Gly	450	455	460	
Gln	Val	Ala	His	Arg	Gly	Met	Glu	Lys	Ser	Leu	Phe	Val	Phe	Thr	Gln	465	470	475	480
Glu	Glu	Val	Gln	Ala	Ser	Gly	Leu	Gln	Glu	Arg	Asp	Met	Gln	Leu	Gly	485	490	495	
Phe	Leu	Arg	Ala	Leu	Pro	Glu	Leu	Gly	Pro	Gly	Gly	Asp	Gln	Gln	Ser	500	505	510	
Tyr	Glu	Phe	His	Leu	Thr	Leu	Gln	Ala	Phe	Phe	Thr	Ala	Phe	Phe		515	520	525	
Leu	Val	Leu	Asp	Asp	Arg	Val	Gly	Thr	Gln	Glu	Leu	Leu	Arg	Phe	Phe	530	535	540	
Gln	Glu	Trp	Met	Pro	Pro	Ala	Gly	Ala	Ala	Thr	Thr	Ser	Cys	Tyr	Pro	545	550	555	560
Pro	Phe	Leu	Pro	Phe	Gln	Cys	Leu	Gln	Gly	Ser	Gly	Pro	Ala	Arg	Glu	565	570	575	
Asp	Leu	Phe	Lys	Asn	Lys	Asp	His	Phe	Gln	Phe	Thr	Asn	Leu	Phe	Leu	580	585	590	
Cys	Gly	Leu	Leu	Ser	Lys	Ala	Lys	Gln	Lys	Leu	Leu	Arg	His	Leu	Val	595	600	605	
Pro	Ala	Ala	Ala	Leu	Arg	Arg	Lys	Arg	Lys	Ala	Leu	Trp	Ala	His	Leu	610	615	620	
Phe	Ser	Ser	Leu	Arg	Gly	Tyr	Leu	Lys	Ser	Leu	Pro	Arg	Val	Gln	Val	625	630	635	640
Glu	Ser	Phe	Asn	Gln	Val	Gln	Ala	Met	Pro	Thr	Phe	Ile	Trp	Met	Leu	645	650	655	
Arg	Cys	Ile	Tyr	Glu	Thr	Gln	Ser	Gln	Lys	Val	Gly	Gln	Leu	Ala	Ala	660	665	670	
Arg	Gly	Ile	Cys	Ala	Asn	Tyr	Leu	Lys	Leu	Thr	Tyr	Cys	Asn	Ala	Cys	675	680	685	
Ser	Ala	Asp	Cys	Ser	Ala	Leu	Ser	Phe	Val	Leu	His	His	Phe	Pro	Lys	690	695	700	
Arg	Leu	Ala	Leu	Asp	Leu	Asp	Asn	Asn	Asn	Leu	Asn	Asp	Tyr	Gly	Val	705	710	715	720
Arg	Glu	Leu	Gln	Pro	Cys	Phe	Ser	Arg	Leu	Thr	Val	Leu	Arg	Leu	Ser	725	730	735	
Val	Asn	Gln	Ile	Thr	Asp	Gly	Gly	Val	Lys	Val	Leu	Ser	Glu	Glu	Leu	740	745	750	
Thr	Lys	Tyr	Lys	Ile	Val	Thr	Tyr	Leu	Gly	Leu	Tyr	Asn	Asn	Gln	Ile	755	760	765	
Thr	Asp	Val	Gly	Ala	Arg	Tyr	Val	Thr	Lys	Ile	Leu	Asp	Glu	Cys	Lys	770	775	780	
Gly	Leu	Thr	His	Leu	Lys	Leu	Gly	Lys	Asn	Lys	Ile	Thr	Ser	Glu	Gly	785	790	795	800
Gly	Lys	Tyr	Leu	Ala	Leu	Ala	Val	Lys	Asn	Ser	Lys	Ser	Ile	Ser	Glu	805	810	815	

Val Gly Met Trp Gly Asn Gln Val Gly Asp Glu Gly Ala Lys Ala Phe
 820 825 830
 Ala Glu Ala Leu Arg Asn His Pro Ser Leu Thr Thr Leu Ser Leu Ala
 835 840 845
 Ser Asn Gly Ile Ser Thr Glu Gly Gly Lys Ser Leu Ala Arg Ala Leu
 850 855 860
 Gln Gln Asn Thr Ser Leu Glu Ile Leu Trp Leu Thr Gln Asn Glu Leu
 865 870 875 880
 Asn Asp Glu Val Ala Glu Ser Leu Ala Glu Met Leu Lys Val Asn Gln
 885 890 895
 Thr Leu Lys His Leu Trp Leu Ile Gln Asn Gln Ile Thr Ala Lys Gly
 900 905 910
 Thr Ala Gln Leu Ala Asp Ala Leu Gln Ser Asn Thr Gly Ile Thr Glu
 915 920 925
 Ile Cys Leu Asn Gly Asn Leu Ile Lys Pro Glu Glu Ala Lys Val Tyr
 930 935 940
 Glu Asp Glu Lys Arg Ile Ile Cys Phe
 945 950 953

<210> 1152
 <211> 307
 <212> PRT
 <213> Homo sapiens

<400> 1152
 Met Gly Cys Asp Gly Gly Thr Ile Pro Lys Arg His Glu Leu Val Lys
 1 5 10 15
 Gly Pro Lys Lys Val Glu Lys Val Asp Lys Asp Ala Glu Leu Val Ala
 20 25 30
 Gln Trp Asn Tyr Cys Thr Leu Ser Gln Glu Ile Leu Arg Arg Pro Ile
 35 40 45
 Val Ala Cys Glu Leu Gly Arg Leu Tyr Asn Lys Asp Ala Val Ile Glu
 50 55 60
 Phe Leu Leu Asp Lys Ser Ala Glu Lys Ala Leu Gly Lys Ala Ala Ser
 65 70 75 80
 His Ile Lys Ser Ile Lys Asn Val Thr Glu Leu Lys Leu Ser Asp Asn
 85 90 95
 Pro Ala Trp Glu Gly Asp Lys Gly Asn Thr Lys Gly Asp Lys His Asp
 100 105 110
 Asp Leu Gln Arg Ala Arg Phe Ile Cys Pro Val Val Gly Leu Glu Met
 115 120 125
 Asn Gly Arg His Arg Phe Cys Phe Leu Arg Cys Cys Gly Cys Val Phe
 130 135 140
 Ser Glu Arg Ala Leu Lys Glu Ile Lys Ala Glu Val Cys His Thr Cys
 145 150 155 160
 Gly Ala Ala Phe Gln Glu Asp Asp Val Ile Val Leu Asn Gly Thr Lys
 165 170 175
 Glu Asp Val Asp Val Leu Lys Thr Arg Met Glu Glu Arg Arg Leu Arg
 180 185 190
 Ala Lys Leu Glu Lys Lys Thr Lys Lys Pro Lys Ala Ala Glu Ser Val
 195 200 205
 Ser Lys Pro Asp Val Ser Glu Glu Ala Pro Gly Pro Ser Lys Val Lys
 210 215 220
 Thr Gly Lys Pro Glu Glu Ala Ser Leu Asp Ser Arg Glu Lys Lys Thr
 225 230 235 240
 Asn Leu Ala Pro Lys Ser Thr Ala Met Asn Glu Ser Ser Ser Gly Lys
 245 250 255
 Ala Gly Lys Pro Pro Cys Gly Ala Thr Lys Arg Ser Ile Ala Asp Ser
 260 265 270
 Glu Glu Ser Glu Ala Tyr Lys Ser Leu Phe Thr Thr His Ser Ser Ala
 275 280 285

Lys Arg Ser Lys Glu Glu Ser Ala His Trp Val Thr His Thr Ser Tyr
 290 295 300
 Cys Phe *
 305 306

<210> 1153
 <211> 540
 <212> PRT
 <213> Homo sapiens

<400> 1153
 Met Lys Arg Met Val Ser Trp Ser Phe His Lys Leu Lys Thr Met Lys
 1 5 10 15
 His Leu Leu Leu Leu Leu Leu Cys Val Phe Leu Val Lys Ser Gln Gly
 20 25 30
 Val Asn Asp Asn Glu Glu Gln Tyr Arg Ile Thr Ile Lys Arg Thr Arg
 35 40 45
 Ser Glu Asn Leu Thr Asn Tyr Lys Ile Ile Lys Glu Gln Asn Phe Lys
 50 55 60
 Ile Lys Glu Thr Gly Asp Glu Lys Thr Gly Ala Gln Ile Lys Gln Leu
 65 70 75 80
 Ala Gln Gly Leu Ile Ala Gly Phe Phe Ser Ala Arg Gly His Arg Pro
 85 90 95
 Leu Asp Lys Lys Arg Glu Glu Ala Pro Ser Leu Arg Pro Ala Pro Pro
 100 105 110
 Pro Ile Ser Gly Gly Gly Tyr Arg Ala Arg Pro Ala Lys Ala Ala Ala
 115 120 125
 Thr Gln Lys Lys Val Glu Arg Lys Ala Pro Asp Ala Gly Gly Cys Leu
 130 135 140
 His Ala Asp Pro Asp Leu Gly Val Leu Cys Pro Thr Gly Cys Gln Leu
 145 150 155 160
 Gln Glu Ala Leu Leu Gln Gln Glu Arg Pro Ile Arg Asn Ser Val Asp
 165 170 175
 Glu Leu Asn Asn Asn Val Glu Ala Val Ser Gln Thr Ser Ser Ser Ser
 180 185 190
 Phe Gln Tyr Met Tyr Leu Leu Lys Asp Leu Trp Gln Lys Arg Gln Lys
 195 200 205
 Gln Val Lys Asp Asn Glu Asn Val Val Asn Glu Tyr Ser Ser Glu Leu
 210 215 220
 Glu Lys His Gln Leu Tyr Ile Asp Glu Thr Val Asn Ser Asn Ile Pro
 225 230 235 240
 Thr Asn Leu Arg Val Leu Arg Ser Ile Leu Glu Asn Leu Arg Ser Lys
 245 250 255
 Ile Gln Lys Leu Glu Ser Asp Val Ser Ala Gln Met Glu Tyr Cys Arg
 260 265 270
 Thr Pro Cys Thr Val Ser Cys Asn Ile Pro Val Val Ser Gly Lys Glu
 275 280 285
 Cys Glu Glu Ile Ile Arg Lys Gly Gly Glu Thr Ser Glu Met Tyr Leu
 290 295 300
 Ile Gln Pro Asp Ser Ser Val Lys Pro Tyr Arg Val Tyr Cys Asp Met
 305 310 315 320
 Asn Thr Glu Asn Gly Gly Trp Thr Val Ile Gln Asn Arg Gln Asp Gly
 325 330 335
 Ser Val Asp Phe Gly Arg Lys Trp Asp Pro Tyr Lys Gln Gly Phe Gly
 340 345 350
 Asn Val Ala Thr Asn Thr Asp Gly Lys Asn Tyr Cys Gly Leu Pro Gly
 355 360 365
 Glu Tyr Trp Leu Gly Asn Asp Lys Ile Ser Gln Leu Thr Arg Met Gly
 370 375 380
 Pro Thr Glu Leu Leu Ile Glu Met Glu Asp Trp Lys Gly Asp Lys Val
 385 390 395 400

Lys Ala His Tyr Gly Gly Phe Thr Val Gln Asn Glu Ala Asn Lys Tyr
 405 410 415
 Gln Ile Ser Val Asn Lys Tyr Arg Gly Thr Ala Gly Asn Ala Leu Met
 420 425 430
 Asp Gly Ala Ser Gln Leu Met Gly Glu Asn Arg Thr Met Thr Ile His
 435 440 445
 Asn Gly Met Phe Phe Ser Thr Tyr Asp Arg Asp Asn Asp Gly Trp Leu
 450 455 460
 Thr Ser Asp Pro Arg Lys Gln Cys Ser Lys Glu Asp Gly Gly Gly Trp
 465 470 475 480
 Trp Tyr Asn Arg Cys His Ala Ala Asn Pro Asn Gly Arg Tyr Tyr Trp
 485 490 495
 Gly Gly Gln Tyr Thr Trp Asp Met Ala Lys His Gly Thr Asp Asp Gly
 500 505 510
 Val Val Trp Met Asn Trp Lys Gly Ser Trp Tyr Ser Met Arg Lys Met
 515 520 525
 Ser Met Lys Ile Arg Pro Phe Phe Pro Gln Gln *
 530 535 539

<210> 1154

<211> 492

<212> PRT

<213> Homo sapiens

<400> 1154

Met Lys Arg Met Val Ser Trp Ser Phe His Lys Leu Lys Thr Met Lys
 1 5 10 15
 His Leu Leu Leu Leu Leu Leu Cys Val Phe Leu Val Lys Ser Gln Gly
 20 25 30
 Val Asn Asp Asn Glu Glu Gly Phe Phe Ser Ala Arg Gly His Arg Pro
 35 40 45
 Leu Asp Lys Lys Arg Glu Glu Ala Pro Ser Leu Arg Pro Ala Pro Pro
 50 55 60
 Pro Ile Ser Gly Gly Gly Tyr Arg Ala Arg Pro Ala Lys Ala Ala Ala
 65 70 75 80
 Thr Gln Lys Lys Val Glu Arg Lys Ala Pro Asp Ala Gly Gly Cys Leu
 85 90 95
 His Ala Asp Pro Asp Leu Gly Val Leu Cys Pro Thr Gly Cys Gln Leu
 100 105 110
 Gln Glu Ala Leu Leu Gln Gln Glu Arg Pro Ile Arg Asn Ser Val Asp
 115 120 125
 Glu Leu Asn Asn Asn Val Glu Ala Val Ser Gln Thr Ser Ser Ser Ser
 130 135 140
 Phe Gln Tyr Met Tyr Leu Lys Asp Leu Trp Gln Lys Arg Gln Lys
 145 150 155 160
 Gln Val Lys Asp Asn Glu Asn Val Val Asn Glu Tyr Ser Ser Glu Leu
 165 170 175
 Glu Lys His Gln Leu Tyr Ile Asp Glu Thr Val Asn Ser Asn Ile Pro
 180 185 190
 Thr Asn Leu Arg Val Leu Arg Ser Ile Leu Glu Asn Leu Arg Ser Lys
 195 200 205
 Ile Gln Lys Leu Glu Ser Asp Val Ser Ala Gln Met Glu Tyr Cys Arg
 210 215 220
 Thr Pro Cys Thr Val Ser Cys Asn Ile Pro Val Val Ser Gly Lys Glu
 225 230 235 240
 Cys Glu Glu Ile Ile Arg Lys Gly Gly Glu Thr Ser Glu Met Tyr Leu
 245 250 255
 Ile Gln Pro Asp Ser Ser Val Lys Pro Tyr Arg Val Tyr Cys Asp Met
 260 265 270
 Asn Thr Glu Asn Gly Gly Trp Thr Val Ile Gln Asn Arg Gln Asp Gly
 275 280 285

```

Ser Val Asp Phe Gly Arg Lys Trp Asp Pro Tyr Lys Gln Gly Phe Gly
  290                295                300
Asn Val Ala Thr Asn Thr Asp Gly Lys Asn Tyr Cys Gly Leu Pro Gly
  305                310                315                320
Glu Tyr Trp Leu Gly Asn Asp Lys Ile Ser Gln Leu Thr Arg Met Gly
                325                330                335
Pro Thr Glu Leu Ile Glu Met Glu Asp Trp Lys Gly Asp Lys Val
                340                345                350
Lys Ala His Tyr Gly Gly Phe Thr Val Gln Asn Glu Ala Asn Lys Tyr
                355                360                365
Gln Ile Ser Val Asn Lys Tyr Arg Gly Thr Ala Gly Asn Ala Leu Met
  370                375                380
Asp Gly Ala Ser Gln Leu Met Gly Glu Asn Arg Thr Met Thr Ile His
  385                390                395                400
Asn Gly Met Phe Phe Ser Thr Tyr Asp Arg Asp Asn Asp Gly Trp Leu
                405                410                415
Thr Ser Asp Pro Arg Lys Gln Cys Ser Lys Glu Asp Gly Gly Gly Trp
                420                425                430
Trp Tyr Asn Arg Cys His Ala Ala Asn Pro Asn Gly Arg Tyr Tyr Trp
  435                440                445
Gly Gly Gln Tyr Thr Trp Asp Met Ala Lys His Gly Thr Asp Asp Gly
  450                455                460
Val Val Trp Met Asn Trp Lys Gly Ser Trp Tyr Ser Met Arg Lys Met
  465                470                475                480
Ser Met Lys Ile Arg Pro Phe Phe Pro Gln Gln *
                485                490 491

```

<210> 1155

<211> 454

<212> PRT

<213> Homo sapiens

<400> 1155

```

Met Lys Arg Met Val Ser Trp Ser Phe His Lys Leu Lys Thr Met Lys
  1                5                10                15
His Leu Leu Leu Leu Leu Leu Cys Val Phe Leu Val Lys Ser Gln Gly
                20                25                30
Val Asn Asp Asn Glu Glu Gly Phe Ser Ala Arg Gly His Arg Pro
  35                40                45
Leu Asp Lys Lys Arg Glu Glu Ala Pro Ser Leu Arg Pro Ala Pro Pro
  50                55                60
Pro Ile Ser Gly Gly Gly Tyr Arg Ala Arg Pro Ala Lys Ala Ala Ala
  65                70                75                80
Thr Gln Lys Lys Val Glu Arg Lys Ala Pro Asp Ala Gly Gly Cys Leu
                85                90                95
His Ala Asp Pro Asp Leu Gly Val Leu Cys Pro Thr Gly Cys Gln Leu
                100                105                110
Gln Glu Ala Leu Leu Gln Gln Glu Arg Pro Ile Arg Asn Ser Val Asp
                115                120                125
Glu Leu Asn Asn Asn Val Glu Ala Val Ser Gln Thr Ser Ser Ser Ser
  130                135                140
Phe Gln Tyr Met Tyr Leu Leu Lys Asp Leu Trp Gln Lys Arg Gln Lys
  145                150                155                160
Gln Val Lys Asp Asn Glu Asn Val Val Asn Glu Tyr Ser Ser Glu Leu
                165                170                175
Glu Lys His Gln Leu Tyr Ile Asp Glu Thr Val Asn Ser Asn Ile Pro
                180                185                190
Thr Asn Leu Arg Val Leu Arg Ser Ile Leu Glu Asn Leu Arg Ser Lys
                195                200                205
Ile Gln Lys Leu Glu Ser Asp Val Ser Ala Gln Met Glu Tyr Cys Arg
  210                215                220

```

```

Thr Pro Cys Thr Val Ser Cys Asn Ile Pro Val Val Ser Gly Lys Gly
225                230                235                240
Trp Thr Val Ile Gln Asn Arg Gln Asp Gly Ser Val Asp Phe Gly Arg
                245                250                255
Lys Trp Asp Pro Tyr Lys Gln Gly Phe Gly Asn Val Ala Thr Asn Thr
                260                265                270
Asp Gly Lys Asn Tyr Cys Gly Leu Pro Gly Glu Tyr Trp Leu Gly Asn
                275                280                285
Asp Lys Ile Ser Gln Leu Thr Arg Met Gly Pro Thr Glu Leu Leu Ile
                290                295                300
Glu Met Glu Asp Trp Lys Gly Asp Lys Val Lys Ala His Tyr Gly Gly
305                310                315                320
Phe Thr Val Gln Asn Glu Ala Asn Lys Tyr Gln Ile Ser Val Asn Lys
                325                330                335
Tyr Arg Gly Thr Ala Gly Asn Ala Leu Met Asp Gly Ala Ser Gln Leu
                340                345                350
Met Gly Glu Asn Arg Thr Met Thr Ile His Asn Gly Met Phe Phe Ser
                355                360                365
Thr Tyr Asp Arg Asp Asn Asp Gly Trp Leu Thr Ser Asp Pro Arg Lys
                370                375                380
Gln Cys Ser Lys Glu Asp Gly Gly Gly Trp Trp Tyr Asn Arg Cys His
385                390                395                400
Ala Ala Asn Pro Asn Gly Arg Tyr Tyr Trp Gly Gly Gln Tyr Thr Trp
                405                410                415
Asp Met Ala Lys His Gly Thr Asp Asp Gly Val Val Trp Met Asn Trp
                420                425                430
Lys Gly Ser Trp Tyr Ser Met Arg Lys Met Ser Met Lys Ile Arg Pro
                435                440                445
Phe Phe Pro Gln Gln *
                450                453

```

<210> 1156
 <211> 151
 <212> PRT
 <213> Homo sapiens

```

<400> 1156
Met Pro Arg Gly Ser Arg Ser Arg Thr Ser Arg Met Ala Pro Pro Ala
 1                5                10                15
Ser Arg Ala Pro Gln Met Arg Ala Ala Pro Arg Pro Ala Pro Val Ala
                20                25                30
Gln Pro Pro Ala Ala Ala Pro Pro Ser Ala Val Gly Ser Ser Ala Ala
                35                40                45
Ala Pro Arg Gln Pro Gly Leu Met Ala Gln Met Ala Thr Thr Ala Ala
                50                55                60
Gly Val Ala Val Gly Ser Ala Val Gly His Thr Leu Gly His Ala Ile
                65                70                75                80
Thr Gly Gly Phe Ser Gly Gly Ser Asn Ala Glu Pro Ala Arg Pro Asp
                85                90                95
Ile Thr Tyr Gln Glu Pro Gln Gly Thr Gln Pro Ala Gln Gln Gln Gln
                100                105                110
Pro Cys Leu Tyr Glu Ile Lys Gln Phe Leu Glu Cys Ala Gln Asn Gln
                115                120                125
Gly Asp Ile Lys Leu Cys Glu Gly Phe Asn Glu Val Leu Lys Gln Cys
                130                135                140
Arg Leu Ala Asn Gly Leu Ala
145                150 151

```

<210> 1157

<211> 230
 <212> PRT
 <213> Homo sapiens

<400> 1157
 Met Ala Gly Ala His Tyr Pro Leu His Cys Leu His Ser Ala Ala Ala
 1 5 10 15
 Ala Ala Ala Ala Gly Ser His His His His His His Gln His His His
 20 25 30
 His Gly Ser Pro Tyr Ala Ser Gly Gly Gly Asn Ser Tyr Asn His Arg
 35 40 45
 Ser Leu Ala Ala Tyr Pro Tyr Met Ser His Ser Gln His Ser Pro Tyr
 50 55 60
 Leu Gln Ser Tyr His Asn Ser Ser Ala Ala Ala Gln Thr Arg Gly Asp
 65 70 75 80
 Asp Thr Asp Gln Gln Lys Thr Thr Val Ile Glu Asn Gly Glu Ile Arg
 85 90 95
 Phe Asn Gly Lys Gly Lys Lys Ile Arg Lys Pro Arg Thr Ile Tyr Ser
 100 105 110
 Ser Leu Gln Leu Gln Ala Leu Asn His Arg Phe Gln Gln Thr Gln Tyr
 115 120 125
 Leu Ala Leu Pro Glu Arg Ala Glu Leu Ala Ala Ser Leu Gly Leu Thr
 130 135 140
 Gln Thr Gln Val Lys Ile Trp Phe Gln Asn Lys Arg Ser Lys Phe Lys
 145 150 155 160
 Lys Leu Leu Lys Gln Gly Ser Asn Pro His Glu Ser Asp Pro Leu Gln
 165 170 175
 Gly Ser Ala Ala Leu Ser Pro Arg Ser Pro Ala Leu Pro Pro Val Trp
 180 185 190
 Asp Val Ser Ala Ser Ala Lys Gly Val Ser Met Pro Pro Asn Ser Tyr
 195 200 205
 Met Pro Gly Tyr Ser His Trp Tyr Ser Ser Pro His Gln Asp Thr Met
 210 215 220
 Gln Arg Pro Gln Met Met
 225 230

<210> 1158
 <211> 2100
 <212> PRT
 <213> Homo sapiens

<400> 1158
 Met Lys Tyr Ala Ile Tyr Ala Leu Cys Val Asn Ser His Gln His Ser
 1 5 10 15
 Gln Cys Gln Asp Cys Lys Asp Ser Leu Ser Glu Asp Leu Ala Ser Ala
 20 25 30
 Thr Glu Pro Ala Asn Asp Ser Leu Ser Ser Pro Gly Ala Ala Asn Leu
 35 40 45
 Phe Ser Thr Tyr Leu Ala Arg Cys Gln Gln Tyr Leu Cys Ser Ile Pro
 50 55 60
 Asp Ser Leu Cys Leu Glu Leu Glu Asn Ile Phe Ser Leu Leu Leu
 65 70 75 80
 Ile Thr Ser Ala Asp Leu His Pro Glu Pro His Leu Pro Glu Asp Tyr
 85 90 95
 Ala Glu Asp Asp Asp Ile Glu Gly Lys Ser Pro Ser Gly Leu Arg Ser
 100 105 110
 Pro Ser Glu Ser Pro Gln His Ile Ala His Pro Glu Arg Lys Ser Glu
 115 120 125
 Arg Gly Ser Leu Gly Val Pro Lys Thr Leu Ala Tyr Thr Met Pro Ser
 130 135 140

His Val Lys Ala Glu Pro Lys Asp Ser Tyr Pro Gly Pro His Arg His														
145				150				155					160	
Ser Phe Leu Asp Leu Lys His Phe Thr Ser Gly Ile Ser Gly Phe Leu														
			165				170						175	
Ala Asp Glu Phe Ala Ile Gly Ala Phe Leu Arg Leu Leu Gln Glu Gln														
			180				185						190	
Leu Asp Glu Ile Ser Ser Arg Ser Pro Pro Glu Lys Pro Lys Gln Glu														
			195			200					205			
Ser Gln Ser Cys Ser Gly Ser Arg Asp Gly Leu Gln Ser Arg Leu His														
			210		215					220				
Arg Leu Ser Lys Val Val Ser Glu Ala Gln Trp Arg His Lys Val Val														
225				230				235					240	
Thr Ser Asn His Arg Ser Gly Glu Arg Arg Val Glu Leu Val Gly Pro														
			245				250						255	
Glu Gly Gly Glu Gly Glu Arg Ser Gln Glu Tyr Gly Arg Glu Leu Gly														
			260			265					270			
Val His Arg Ser His Pro Ile Thr Gln Gly Ile Ser Ser Pro Trp Gln														
			275			280					285			
Pro Val Ser Glu His Trp Gly Met Leu His Val Ser Glu Pro Ser Ala														
			290		295			300						
Asn Leu Pro Gln Pro Val Met Pro Arg Lys Gly Gln Ile Lys Val Asp														
305				310			315						320	
His Ser Pro Phe Cys Pro Ile Gly Phe Ala Leu Ser Glu Glu Gln Pro														
			325				330						335	
Ser Arg Arg Tyr Gln Pro Ala Thr Arg His Pro Ser Leu Arg Arg Gly														
			340				345						350	
Arg Arg Thr Arg Arg Ser Gln Ala Glu Gly Ser Leu Ser Ala Met Ser														
			355			360					365			
Gly Arg Asn Glu Leu His Ser Arg Leu His Pro His Pro Gln Ser Ser														
			370		375			380						
Leu Ile Pro Met Met Phe Ser Pro Pro Glu Ser Leu Leu Ala Ser Cys														
385				390			395						400	
Ile Leu Arg Gly Asn Phe Ala Glu Ala His Gln Val Leu Phe Thr Phe														
			405				410						415	
Asn Leu Lys Ser Ser Pro Ser Ser Gly Glu Leu Met Phe Met Glu Arg														
			420			425					430			
Tyr Gln Glu Val Ile Gln Glu Leu Ala Gln Val Glu His Lys Ile Glu														
			435			440					445			
Asn Gln Asn Ser Asp Ala Gly Ser Ser Thr Ile Arg Arg Thr Gly Ser														
			450		455			460						
Gly Arg Ser Thr Leu Gln Ala Ile Gly Ser Ala Ala Ala Ala Gly Met														
465				470			475						480	
Val Phe Tyr Ser Ile Ser Asp Val Thr Asp Lys Leu Leu Asn Thr Ser														
			485				490						495	
Gly Asp Pro Ile Pro Met Leu Gln Glu Asp Phe Trp Ile Ser Thr Ala														
			500			505					510			
Leu Val Glu Pro Thr Ala Pro Leu Arg Glu Val Leu Glu Asp Leu Ser														
			515			520					525			
Pro Pro Ala Met Ala Ala Phe Asp Leu Ala Cys Ser Gln Cys Gln Leu														
			530		535			540						
Trp Lys Thr Cys Lys Gln Leu Leu Glu Thr Ala Glu Arg Arg Leu Asn														
545				550			555						560	
Ser Ser Leu Glu Arg Arg Gly Arg Arg Ile Asp His Val Leu Leu Asn														
			565				570						575	
Ala Asp Gly Ile Arg Gly Phe Pro Val Val Leu Gln Gln Ile Ser Lys														
			580			585					590			
Ser Leu Asn Tyr Leu Leu Met Ser Ala Ser Gln Thr Lys Ser Glu Ser														
			595		600			605						
Val Glu Glu Lys Gly Gly Gly Pro Pro Arg Cys Ser Ile Thr Glu Leu														
			610		615			620						
Leu Gln Met Cys Trp Pro Ser Leu Ser Glu Asp Cys Val Ala Ser His														
625				630			635						640	
Thr Thr Leu Ser Gln Gln Leu Asp Gln Val Leu Gln Ser Leu Arg Glu														
			645				650						655	

Ala	Leu	Glu	Leu	Pro	Glu	Pro	Arg	Thr	Pro	Pro	Leu	Ser	Ser	Leu	Val
			660					665					670		
Glu	Gln	Ala	Ala	Gln	Lys	Ala	Pro	Glu	Ala	Glu	Ala	His	Pro	Val	Gln
		675					680					685			
Ile	Gln	Thr	Gln	Leu	Leu	Gln	Lys	Asn	Leu	Gly	Lys	Gln	Thr	Pro	Ser
	690					695					700				
Gly	Ser	Arg	Gln	Met	Asp	Tyr	Leu	Gly	Thr	Phe	Phe	Ser	Tyr	Cys	Ser
705					710					715					720
Thr	Leu	Ala	Ala	Val	Leu	Leu	Gln	Ser	Leu	Ser	Ser	Glu	Pro	Asp	His
				725					730					735	
Val	Glu	Val	Lys	Val	Gly	Asn	Pro	Phe	Val	Leu	Leu	Gln	Gln	Ser	Ser
			740					745					750		
Ser	Gln	Leu	Val	Ser	His	Leu	Leu	Phe	Glu	Arg	Gln	Val	Pro	Pro	Glu
		755					760					765			
Arg	Leu	Ala	Ala	Leu	Leu	Ala	Gln	Glu	Asn	Leu	Ser	Leu	Ser	Val	Pro
		770				775					780				
Gln	Val	Ile	Val	Ser	Cys	Cys	Cys	Glu	Pro	Leu	Ala	Leu	Cys	Ser	Ser
785					790					795					800
Arg	Gln	Ser	Gln	Gln	Thr	Ser	Ser	Leu	Leu	Thr	Arg	Leu	Gly	Thr	Leu
			805						810					815	
Ala	Gln	Leu	His	Ala	Ser	His	Cys	Leu	Asp	Asp	Leu	Pro	Leu	Ser	Thr
			820					825					830		
Pro	Ser	Ser	Pro	Arg	Thr	Thr	Glu	Asn	Pro	Thr	Leu	Glu	Arg	Lys	Pro
		835					840					845			
Tyr	Ser	Ser	Pro	Arg	Asp	Ser	Ser	Leu	Pro	Ala	Leu	Thr	Ser	Ser	Ala
	850				855					860					
Leu	Ala	Phe	Leu	Lys	Ser	Arg	Ser	Lys	Leu	Leu	Ala	Thr	Val	Ala	Cys
865				870						875					880
Leu	Gly	Ala	Ser	Pro	Arg	Leu	Lys	Val	Ser	Lys	Pro	Ser	Leu	Ser	Trp
			885						890					895	
Lys	Glu	Leu	Arg	Gly	Arg	Arg	Glu	Val	Pro	Leu	Ala	Ala	Glu	Gln	Val
			900					905					910		
Ala	Arg	Glu	Cys	Glu	Arg	Leu	Leu	Glu	Gln	Phe	Pro	Leu	Phe	Glu	Ala
		915					920					925			
Phe	Leu	Leu	Ala	Ala	Trp	Glu	Pro	Leu	Arg	Gly	Ser	Leu	Gln	Gln	Gly
	930					935					940				
Gln	Ser	Leu	Ala	Val	Asn	Leu	Cys	Gly	Trp	Ala	Ser	Leu	Ser	Thr	Val
945					950					955					960
Leu	Leu	Gly	Leu	His	Ser	Pro	Ile	Ala	Leu	Asp	Val	Leu	Ser	Glu	Ala
			965						970					975	
Phe	Glu	Glu	Ser	Leu	Val	Ala	Arg	Asp	Trp	Ser	Arg	Ala	Leu	Gln	Leu
			980					985					990		
Thr	Glu	Val	Tyr	Gly	Arg	Asp	Val	Asp	Asp	Leu	Ser	Ser	Ile	Lys	Asp
		995					1000					1005			
Ala	Val	Leu	Ser	Cys	Ala	Val	Ala	Cys	Asp	Lys	Glu	Gly	Trp	Gln	Tyr
	1010					1015					1020				
Leu	Phe	Pro	Val	Lys	Asp	Ala	Ser	Leu	Arg	Ser	Arg	Leu	Ala	Leu	Gln
1025				1030						1035					1040
Phe	Val	Asp	Arg	Trp	Pro	Leu	Glu	Ser	Cys	Leu	Glu	Ile	Leu	Ala	Tyr
			1045						1050				1055		
Cys	Ile	Ser	Asp	Thr	Ala	Val	Gln	Glu	Gly	Leu	Lys	Cys	Glu	Leu	Gln
			1060					1065					1070		
Arg	Lys	Leu	Ala	Glu	Leu	Gln	Val	Tyr	Gln	Lys	Ile	Leu	Gly	Leu	Gln
		1075					1080					1085			
Ser	Pro	Pro	Val	Trp	Cys	Asp	Trp	Gln	Thr	Leu	Arg	Ser	Cys	Cys	Val
	1090					1095					1100				
Glu	Asp	Pro	Ser	Thr	Val	Met	Asn	Met	Ile	Leu	Glu	Ala	Gln	Glu	Tyr
1105				1110						1115					1120
Glu	Leu	Cys	Glu	Glu	Trp	Gly	Cys	Leu	Tyr	Pro	Ile	Pro	Arg	Glu	His
			1125						1130					1135	
Leu	Ile	Ser	Leu	His	Gln	Lys	His	Leu	Leu	His	Leu	Leu	Glu	Arg	Arg
			1140					1145					1150		
Asp	His	Asp	Lys	Ala	Leu	Gln	Leu	Arg	Arg	Ile	Pro	Asp	Pro	Thr	
	1155						1160					1165			

Met Cys Leu Glu Val Thr Glu Gln Ser Leu Asp Gln His Thr Ser Leu
 1170 1175 1180
 Ala Thr Ser His Phe Leu Ala Asn Tyr Leu Thr Thr His Phe Tyr Gly
 1185 1190 1195 1200
 Gln Leu Thr Ala Val Arg His Arg Glu Ile Gln Ala Leu Tyr Val Gly
 1205 1210 1215
 Ser Lys Ile Leu Thr Leu Pro Glu Gln His Arg Ala Ser Tyr Ser
 1220 1225 1230
 His Leu Ser Ser Asn Pro Leu Phe Met Leu Glu Gln Leu Leu Met Asn
 1235 1240 1245
 Met Lys Val Asp Trp Ala Thr Val Ala Val Gln Thr Leu Gln Gln Leu
 1250 1255 1260
 Leu Val Gly Gln Glu Ile Gly Phe Thr Met Asp Glu Val Asp Ser Leu
 1265 1270 1275 1280
 Leu Ser Arg Tyr Ala Glu Lys Ala Leu Asp Phe Pro Tyr Pro Gln Arg
 1285 1290 1295
 Glu Lys Arg Ser Asp Ser Val Ile His Leu Gln Glu Ile Val His Gln
 1300 1305 1310
 Ala Ala Asp Pro Glu Thr Leu Pro Arg Ser Pro Ser Ala Glu Phe Ser
 1315 1320 1325
 Pro Ala Ala Pro Pro Gly Ile Ser Ser Ile His Ser Pro Ser Leu Arg
 1330 1335 1340
 Glu Arg Ser Phe Pro Pro Thr Gln Pro Ser Gln Glu Phe Val Pro Pro
 1345 1350 1355 1360
 Ala Thr Pro Pro Ala Arg His Gln Trp Val Pro Asp Glu Thr Glu Ser
 1365 1370 1375
 Ile Cys Met Val Cys Cys Arg Glu His Phe Thr Met Phe Asn Arg Arg
 1380 1385 1390
 His His Cys Arg Arg Cys Gly Arg Leu Val Cys Ser Ser Cys Ser Thr
 1395 1400 1405
 Lys Lys Met Val Val Glu Gly Cys Arg Glu Asn Pro Ala Arg Val Cys
 1410 1415 1420
 Asp Gln Cys Tyr Ser Tyr Cys Asn Lys Asp Val Pro Glu Glu Pro Ser
 1425 1430 1435 1440
 Glu Lys Pro Glu Ala Leu Asp Ser Ser Lys Ser Glu Ser Pro Pro Tyr
 1445 1450 1455
 Ser Phe Val Val Arg Val Pro Lys Ala Asp Glu Val Glu Trp Ile Leu
 1460 1465 1470
 Asp Leu Lys Glu Glu Glu Asn Glu Leu Val Arg Ser Glu Phe Tyr Tyr
 1475 1480 1485
 Glu Gln Ala Pro Ser Ala Ser Leu Cys Ile Ala Ile Leu Asn Leu His
 1490 1495 1500
 Arg Asp Ser Ile Ala Cys Gly His Gln Leu Ile Glu His Cys Cys Arg
 1505 1510 1515 1520
 Leu Ser Lys Gly Leu Thr Asn Pro Glu Val Asp Ala Gly Leu Leu Thr
 1525 1530 1535
 Asp Ile Met Lys Gln Leu Leu Phe Ser Ala Lys Met Met Phe Val Lys
 1540 1545 1550
 Ala Gly Gln Ser Gln Asp Leu Ala Leu Cys Asp Ser Tyr Ile Ser Lys
 1555 1560 1565
 Val Asp Val Leu Asn Ile Leu Val Ala Ala Ala Tyr Arg His Val Pro
 1570 1575 1580
 Ser Leu Asp Gln Ile Leu Gln Pro Ala Ala Val Thr Arg Leu Arg Asn
 1585 1590 1595 1600
 Gln Leu Leu Glu Ala Glu Tyr Tyr Gln Leu Gly Val Glu Val Ser Thr
 1605 1610 1615
 Lys Thr Gly Leu Asp Thr Thr Gly Ala Trp His Ala Trp Gly Met Ala
 1620 1625 1630
 Cys Leu Lys Ala Gly Asn Leu Thr Ala Ala Arg Glu Lys Phe Ser Arg
 1635 1640 1645
 Cys Leu Lys Pro Pro Phe Asp Leu Asn Gln Leu Asn His Gly Ser Arg
 1650 1655 1660
 Leu Val Gln Asp Val Val Glu Tyr Leu Glu Ser Thr Val Arg Pro Phe
 1665 1670 1675 1680

Val Ser Leu Gln Asp Asp Asp Tyr Phe Ala Thr Leu Arg Glu Leu Glu
 1685 1690 1695
 Ala Thr Leu Arg Thr Gln Ser Leu Ser Leu Ala Val Ile Pro Glu Gly
 1700 1705 1710
 Lys Ile Met Asn Asn Thr Tyr Tyr Gln Glu Cys Leu Phe Tyr Leu His
 1715 1720 1725
 Asn Tyr Ser Thr Asn Leu Ala Ile Ile Ser Phe Tyr Val Arg His Ser
 1730 1735 1740
 Cys Leu Arg Glu Ala Leu Leu His Leu Leu Asn Lys Glu Ser Pro Pro
 1745 1750 1755 1760
 Glu Val Phe Ile Glu Gly Ile Phe Gln Pro Ser Tyr Lys Ser Gly Lys
 1765 1770 1775
 Leu His Thr Leu Glu Asn Leu Leu Glu Ser Ile Asp Pro Thr Leu Glu
 1780 1785 1790
 Ser Trp Gly Lys Tyr Leu Ile Ala Cys Gln His Leu Gln Lys Lys
 1795 1800 1805
 Asn Tyr Tyr His Ile Leu Tyr Glu Leu Gln Gln Phe Met Lys Asp Gln
 1810 1815 1820
 Val Arg Ala Ala Met Thr Cys Ile Arg Phe Phe Ser His Lys Ala Lys
 1825 1830 1835 1840
 Ser Tyr Thr Glu Leu Gly Glu Lys Leu Ser Trp Leu Leu Lys Ala Lys
 1845 1850 1855
 Asp His Leu Lys Ile Tyr Leu Gln Glu Thr Ser Arg Ser Ser Gly Arg
 1860 1865 1870
 Lys Lys Thr Thr Phe Phe Arg Lys Lys Met Thr Ala Ala Asp Val Ser
 1875 1880 1885
 Arg His Met Asn Thr Leu Gln Leu Gln Met Glu Val Thr Arg Phe Leu
 1890 1895 1900
 His Arg Cys Glu Ser Ala Gly Thr Ser Gln Ile Thr Thr Leu Pro Leu
 1905 1910 1915 1920
 Pro Thr Leu Phe Gly Asn Asn His Met Lys Met Asp Val Ala Cys Lys
 1925 1930 1935
 Val Met Leu Gly Gly Lys Asn Val Glu Asp Gly Phe Gly Ile Ala Phe
 1940 1945 1950
 Arg Val Leu Gln Asp Phe Gln Leu Asp Ala Ala Met Thr Tyr Cys Arg
 1955 1960 1965
 Ala Ala Arg Gln Leu Val Glu Lys Glu Lys Tyr Ser Glu Ile Gln Gln
 1970 1975 1980
 Leu Leu Lys Cys Val Ser Glu Ser Gly Met Ala Ala Lys Ser Asp Gly
 1985 1990 1995 2000
 Asp Thr Ile Leu Leu Asn Cys Leu Glu Ala Phe Lys Arg Ile Pro Pro
 2005 2010 2015
 Gln Glu Leu Glu Gly Leu Ile Gln Ala Ile His Asn Asp Asp Asn Lys
 2020 2025 2030
 Val Arg Ala Tyr Leu Ile Cys Cys Lys Leu Arg Ser Ala Tyr Leu Ile
 2035 2040 2045
 Ala Val Lys Gln Glu His Ser Arg Ala Thr Ala Leu Val Gln Gln Val
 2050 2055 2060
 Gln Gln Ala Ala Lys Ser Ser Gly Asp Ala Val Val Gln Asp Ile Cys
 2065 2070 2075 2080
 Ala Gln Trp Leu Leu Thr Ser His Pro Arg Gly Ala His Gly Pro Gly
 2085 2090 2095
 Ser Arg Lys *
 2099

<210> 1159
 <211> 711
 <212> PRT
 <213> Homo sapiens

<400> 1159

Met	Trp	Ala	Ser	Gln	Val	Ser	Ser	Phe	Gln	Ala	Ser	Pro	Phe	Leu	Thr	1	5	10	15
Leu	Trp	Met	Thr	Gly	Ala	Pro	Leu	Thr	Ala	Arg	Ile	Ala	Leu	Gly	Pro	20	25	30	
Pro	Leu	Ala	Trp	Ile	Pro	Ala	Ala	Ser	Leu	Thr	Ser	Thr	Lys	Gly	Glu	35	40	45	
Phe	Gly	Val	Glu	Asp	Asp	Arg	Pro	Ala	Arg	Gly	Pro	Pro	Pro	Pro	Lys	50	55	60	
Ser	Glu	Glu	Ala	Ser	Trp	Ser	Glu	Ser	Gly	Val	Ser	Ser	Ser	Ser	Gly	65	70	75	80
Asp	Gly	Pro	Phe	Ala	Gly	Gly	Glu	Val	Asp	Lys	Arg	Leu	His	Gln	Leu	85	90	95	
Lys	Thr	Gln	Leu	Ala	Thr	Leu	Thr	Ser	Ser	Leu	Ala	Thr	Val	Thr	Gln	100	105	110	
Glu	Lys	Ser	Arg	Met	Glu	Ala	Ser	Tyr	Leu	Ala	Asp	Lys	Lys	Lys	Met	115	120	125	
Lys	Gln	Asp	Leu	Glu	Asp	Ala	Ser	Asn	Lys	Ala	Glu	Glu	Glu	Arg	Ala	130	135	140	
Arg	Leu	Glu	Gly	Glu	Leu	Lys	Gly	Leu	Gln	Glu	Gln	Ile	Ala	Glu	Thr	145	150	155	160
Lys	Ala	Arg	Leu	Ile	Thr	Gln	Gln	His	Asp	Arg	Ala	Gln	Glu	Gln	Ser	165	170	175	
Asp	His	Ala	Leu	Met	Leu	Arg	Glu	Leu	Gln	Lys	Leu	Leu	Gln	Glu	Glu	180	185	190	
Arg	Thr	Gln	Arg	Gln	Asp	Leu	Glu	Leu	Arg	Leu	Glu	Glu	Thr	Arg	Glu	195	200	205	
Ala	Leu	Ala	Gly	Arg	Ala	Tyr	Ala	Ala	Glu	Gln	Met	Glu	Gly	Phe	Glu	210	215	220	
Leu	Gln	Thr	Lys	Gln	Leu	Thr	Arg	Glu	Val	Glu	Glu	Leu	Lys	Ser	Glu	225	230	235	240
Leu	Gln	Ala	Ile	Arg	Asp	Glu	Lys	Asn	Gln	Pro	Asp	Pro	Arg	Leu	Gln	245	250	255	
Glu	Leu	Gln	Glu	Glu	Ala	Ala	Arg	Leu	Lys	Ser	His	Phe	Gln	Ala	Gln	260	265	270	
Leu	Gln	Gln	Glu	Met	Arg	Lys	Thr	Ala	Leu	Ala	Glu	Asp	Gln	Leu	Arg	275	280	285	
Gln	Gln	Ser	Gln	Val	Glu	Glu	Gln	Arg	Val	Ala	Ala	Leu	Glu	Asn	Gln	290	295	300	
Ile	Ser	Glu	Val	Ser	Glu	Leu	Leu	Gly	Thr	Tyr	Glu	Lys	Ala	Lys	Gln	305	310	315	320
Lys	Asp	Gln	Leu	Ala	Ile	Gln	Lys	Leu	Lys	Glu	Arg	Ile	Leu	Gln	Leu	325	330	335	
Asp	Leu	Glu	Asn	Lys	Thr	Leu	Ala	Leu	Ala	Ala	Ser	Ser	Arg	Ser	Pro	340	345	350	
Leu	Asp	Ser	His	Gly	Glu	Glu	Ser	Ser	Leu	Asp	Val	Asn	Val	Leu	Lys	355	360	365	
Asp	Lys	Met	Glu	Lys	Leu	Lys	Arg	Leu	Leu	Gln	Val	Ala	Ala	Arg	Lys	370	375	380	
Ser	Gln	Val	Thr	Leu	Asp	Val	Glu	Lys	Leu	Cys	Asp	Leu	Glu	Ile	Met	385	390	395	400
Pro	Ser	Ser	Glu	Ala	Ala	Asp	Gly	Glu	Lys	Ala	Thr	Ala	Leu	Tyr	Tyr	405	410	415	
Gln	Gln	Glu	Leu	Lys	Gln	Leu	Lys	Glu	Glu	Phe	Glu	Arg	Tyr	Lys	Met	420	425	430	
Arg	Ala	Gln	Val	Val	Leu	Lys	Ser	Lys	Asn	Thr	Lys	Asp	Gly	Asn	Leu	435	440	445	
Gly	Lys	Glu	Leu	Glu	Ala	Ala	Gln	Glu	Gln	Leu	Ala	Glu	Leu	Lys	Glu	450	455	460	
Lys	Tyr	Ile	Ser	Leu	Arg	Leu	Ser	Cys	Glu	Glu	Leu	Glu	His	Gln	His	465	470	475	480
Gln	Gln	Glu	Ala	Asp	Asp	Trp	Lys	Gln	Glu	Leu	Ala	Arg	Leu	Gln	Gln	485	490	495	
Leu	His	Arg	Gln	Glu	Leu	Glu	Arg	Cys	Gln	Leu	Asp	Phe	Arg	Asp	Arg	500	505	510	

```

Thr Leu Lys Leu Glu Glu Glu Leu His Lys Gln Arg Asp Arg Ala Leu
      515                      520                      525
Ala Val Leu Thr Glu Lys Asp Leu Glu Leu Glu Gln Leu Arg Ser Val
      530                      535                      540
Ala Leu Ala Ser Gly Leu Pro Gly Arg Arg Ser Pro Val Gly Gly Gly
545                      550                      555                      560
Gly Pro Gly Asp Pro Ala Asp Thr Ser Ser Ser Asp Ser Leu Thr Gln
      565                      570                      575
Ala Leu Gln Leu Ala Ala Ala Asn Glu Pro Thr Phe Phe Leu Tyr Ala
      580                      585                      590
Glu Gln Leu Ala Arg Lys Glu Val Glu Ile Thr Ser Leu Arg Lys Gln
      595                      600                      605
Lys His Arg Leu Glu Val Glu Val His Gln Leu Gln Asp Arg Leu Leu
      610                      615                      620
Glu Glu Gly Glu Arg His Arg Glu Glu Val Ala Ala Leu Gln Ser His
625                      630                      635                      640
Ile Glu Lys Asn Ile Arg Asp Gln Ser Arg Glu Gly Ala Asn Leu Glu
      645                      650                      655
Tyr Leu Lys Asn Ile Ile Tyr Arg Phe Leu Thr Leu Pro Asp Ser Leu
      660                      665                      670
Gly Arg Gln Gln Thr Leu Thr Ala Ile Leu Thr Ile Leu His Phe Ser
      675                      680                      685
Pro Glu Glu Lys Gln Val Ile Met Arg Leu Pro Thr Ser Ala Ser Trp
      690                      695                      700
Trp Pro Ser Gly Lys Arg *
705                      710

```

<210> 1160
 <211> 339
 <212> PRT
 <213> Homo sapiens

<400> 1160

```

Met Ala Ala Ala Cys Gly Pro Gly Ala Ala Gly Tyr Cys Leu Leu Leu
  1                      5                      10                      15
Gly Leu His Leu Phe Leu Leu Thr Ala Gly Pro Ala Leu Gly Trp Asn
      20                      25                      30
Asp Pro Asp Arg Met Leu Leu Arg Asp Val Lys Ala Leu Thr Leu His
      35                      40                      45
Tyr Asp Arg Tyr Thr Thr Ser Arg Arg Leu Asp Pro Ile Pro Gln Leu
      50                      55                      60
Lys Cys Val Gly Gly Thr Ala Gly Cys Asp Ser Tyr Thr Pro Lys Val
      65                      70                      75                      80
Ile Gln Cys Gln Asn Lys Gly Trp Asp Gly Tyr Asp Val Gln Trp Glu
      85                      90                      95
Cys Lys Thr Asp Leu Asp Ile Ala Tyr Lys Phe Gly Lys Thr Val Val
      100                      105                      110
Ser Cys Glu Gly Tyr Glu Ser Ser Glu Asp Gln Tyr Val Leu Arg Gly
      115                      120                      125
Ser Cys Gly Leu Glu Tyr Asn Leu Asp Tyr Thr Glu Leu Gly Leu Gln
      130                      135                      140
Lys Leu Lys Glu Ser Gly Lys Gln His Gly Phe Ala Ser Phe Ser Asp
145                      150                      155                      160
Tyr Tyr Tyr Lys Trp Ser Ser Ala Asp Ser Cys Asn Met Ser Gly Leu
      165                      170                      175
Ile Thr Ile Val Val Leu Leu Gly Ile Ala Phe Val Val Tyr Lys Leu
      180                      185                      190
Phe Leu Ser Asp Gly Gln Tyr Ser Pro Pro Pro Tyr Ser Glu Tyr Pro
      195                      200                      205
Pro Phe Ser His Arg Tyr Gln Arg Phe Thr Asn Ser Ala Gly Pro Pro
210                      215                      220

```

Pro Pro Gly Phe Lys Ser Glu Phe Thr Gly Pro Gln Asn Thr Gly His
 225 230 235 240
 Gly Ala Thr Ser Gly Phe Gly Ser Ala Phe Thr Gly Gln Gln Gly Tyr
 245 250 255
 Glu Asn Ser Gly Pro Gly Phe Trp Thr Gly Leu Gly Thr Gly Ile
 260 265 270
 Leu Gly Tyr Leu Phe Gly Ser Asn Arg Ala Ala Thr Pro Phe Ser Asp
 275 280 285
 Ser Trp Tyr Tyr Pro Ser Tyr Pro Pro Ser Tyr Pro Gly Thr Trp Asn
 290 295 300
 Arg Ala Tyr Ser Pro Leu His Gly Gly Ser Gly Ser Tyr Ser Val Cys
 305 310 315 320
 Ser Asn Ser Asp Thr Lys Thr Arg Thr Ala Ser Gly Tyr Gly Gly Thr
 325 330 335
 Arg Arg Arg
 339

<210> 1161
 <211> 367
 <212> PRT
 <213> Homo sapiens

<400> 1161
 Met Ile Arg Asn Trp Leu Thr Ile Phe Ile Leu Phe Pro Leu Lys Leu
 1 5 10 15
 Val Glu Lys Cys Glu Ser Ser Val Ser Leu Thr Val Pro Pro Val Val
 20 25 30
 Lys Leu Glu Asn Gly Ser Ser Thr Asn Val Ser Leu Thr Leu Arg Pro
 35 40 45
 Pro Leu Asn Ala Thr Leu Val Ile Thr Phe Glu Ile Thr Phe Arg Ser
 50 55 60
 Lys Asn Ile Thr Ile Leu Glu Leu Pro Asp Glu Val Val Val Pro Pro
 65 70 75 80
 Gly Val Thr Asn Ser Ser Phe Gln Val Thr Ser Gln Asn Val Gly Gln
 85 90 95
 Leu Thr Val Tyr Leu His Gly Asn His Ser Asn Gln Thr Gly Pro Arg
 100 105 110
 Ile Arg Phe Leu Val Ile Arg Ser Ser Ala Ile Ser Ile Ile Asn Gln
 115 120 125
 Val Ile Gly Trp Ile Tyr Phe Val Ala Trp Ser Ile Ser Phe Tyr Pro
 130 135 140
 Gln Val Ile Met Asn Trp Arg Arg Lys Ser Val Ile Gly Leu Ser Phe
 145 150 155 160
 Asp Phe Val Ala Leu Asn Leu Thr Gly Phe Val Ala Tyr Ser Val Phe
 165 170 175
 Asn Ile Gly Leu Leu Trp Val Pro Tyr Ile Lys Glu Gln Phe Leu Leu
 180 185 190
 Lys Tyr Pro Asn Gly Val Asn Pro Val Asn Ser Asn Asp Val Phe Phe
 195 200 205
 Ser Leu His Ala Val Val Leu Thr Leu Ile Ile Ile Val Gln Cys Cys
 210 215 220
 Leu Tyr Glu Arg Gly Gly Gln Arg Val Ser Trp Pro Ala Ile Gly Phe
 225 230 235 240
 Leu Val Leu Ala Trp Leu Phe Ala Phe Val Thr Met Ile Val Ala Ala
 245 250 255
 Val Gly Val Ile Thr Trp Leu Gln Phe Leu Phe Cys Phe Ser Tyr Ile
 260 265 270
 Lys Leu Ala Val Thr Leu Val Lys Tyr Phe Pro Gln Ala Tyr Met Asn
 275 280 285
 Phe Tyr Tyr Lys Ser Thr Glu Gly Trp Ser Ile Gly Asn Val Leu Leu
 290 295 300

Asp Phe Thr Gly Gly Ser Phe Ser Leu Leu Gln Met Phe Leu Gln Ser
 305 310 315 320
 Tyr Asn Asn Asp Gln Trp Thr Leu Ile Phe Gly Asp Pro Thr Lys Phe
 325 330 335
 Gly Leu Gly Val Phe Ser Ile Val Phe Asp Val Val Phe Phe Ile Gln
 340 345 350
 His Phe Cys Leu Tyr Arg Lys Arg Pro Gly Tyr Asp Gln Leu Asn
 355 360 365 367

<210> 1162

<211> 638

<212> PRT

<213> Homo sapiens

<400> 1162

Met Leu Gly Lys Gly Val Val Gly Gly Gly Gly Gly Thr Lys Ala Pro
 1 5 10 15
 Lys Pro Ser Phe Val Ser Tyr Val Arg Pro Glu Glu Ile His Thr Asn
 20 25 30
 Glu Lys Glu Val Thr Glu Lys Glu Val Thr Leu His Leu Leu Pro Gly
 35 40 45
 Glu Gln Leu Leu Cys Glu Ala Ser Thr Val Leu Lys Tyr Val Gln Glu
 50 55 60
 Asp Ser Cys Gln His Gly Val Tyr Gly Arg Leu Val Cys Thr Asp Phe
 65 70 75 80
 Lys Ile Ala Phe Leu Gly Asp Asp Glu Ser Ala Leu Asp Asn Asp Glu
 85 90 95
 Thr Gln Phe Lys Asn Lys Val Ile Gly Glu Asn Asp Ile Thr Leu His
 100 105 110
 Cys Val Asp Gln Ile Tyr Gly Val Phe Asp Glu Lys Lys Lys Thr Leu
 115 120 125
 Phe Gly Gln Leu Lys Lys Tyr Pro Glu Lys Leu Ile Ile His Cys Lys
 130 135 140
 Asp Leu Arg Val Phe Gln Phe Cys Leu Arg Tyr Thr Lys Glu Glu Glu
 145 150 155 160
 Val Lys Arg Ile Val Ser Gly Ile Ile His His Thr Gln Ala Pro Lys
 165 170 175
 Leu Leu Lys Arg Leu Phe Leu Phe Ser Tyr Ala Thr Ala Ala Gln Asn
 180 185 190
 Asn Thr Val Thr Asp Pro Lys Asn His Thr Val Met Phe Asp Thr Leu
 195 200 205
 Lys Asp Trp Cys Trp Glu Leu Glu Arg Thr Lys Gly Asn Met Lys Tyr
 210 215 220
 Lys Ala Val Ser Val Asn Glu Gly Tyr Lys Val Cys Glu Arg Leu Pro
 225 230 235 240
 Ala Tyr Phe Val Val Pro Thr Pro Leu Pro Glu Glu Asn Val Gln Arg
 245 250 255
 Phe Gln Gly His Gly Ile Pro Ile Trp Cys Trp Ser Cys His Asn Gly
 260 265 270
 Ser Ala Leu Leu Lys Met Ser Ala Leu Pro Lys Glu Gln Asp Asp Gly
 275 280 285
 Ile Leu Gln Ile Gln Lys Ser Phe Leu Asp Gly Ile Tyr Lys Thr Ile
 290 295 300
 His Arg Pro Pro Tyr Glu Ile Val Lys Thr Glu Asp Leu Ser Ser Asn
 305 310 315 320
 Phe Leu Ser Leu Gln Glu Ile Gln Thr Ala Tyr Ser Lys Phe Lys Gln
 325 330 335
 Leu Phe Leu Ile Asp Asn Ser Thr Glu Phe Trp Asp Thr Asp Ile Lys
 340 345 350
 Trp Phe Ser Leu Leu Glu Ser Ser Ser Trp Leu Asp Ile Ile Arg Arg
 355 360 365

Cys Leu Lys Lys Ala Ile Glu Ile Thr Glu Cys Met Glu Ala Gln Asn
 370 375 380
 Met Asn Val Leu Leu Leu Glu Glu Asn Ala Ser Asp Leu Cys Cys Leu
 385 390 395 400
 Ile Ser Ser Leu Val Gln Leu Met Met Asp Pro His Cys Arg Thr Arg
 405 410 415
 Ile Gly Phe Gln Ser Leu Ile Gln Lys Glu Trp Val Met Gly Gly His
 420 425 430
 Cys Phe Leu Asp Arg Cys Asn His Leu Arg Gln Asn Asp Lys Glu Glu
 435 440 445
 His Gln Arg Gln Leu Ser Leu Pro Leu Thr Gln Ser Lys Ser Ser Pro
 450 455 460
 Lys Arg Gly Phe Phe Arg Glu Glu Thr Asp His Leu Ile Lys Asn Leu
 465 470 475 480
 Leu Gly Lys Arg Ile Ser Lys Leu Ile Asn Ser Ser Asp Glu Leu Gln
 485 490 495
 Asp Asn Phe Arg Glu Phe Tyr Asp Ser Trp His Ser Lys Ser Thr Asp
 500 505 510
 Tyr His Gly Leu Leu Leu Pro His Ile Glu Gly Pro Glu Ile Lys Val
 515 520 525
 Trp Ala Gln Arg Tyr Leu Arg Trp Ile Pro Glu Ala Gln Ile Leu Gly
 530 535 540
 Gly Gly Gln Val Ala Thr Leu Ser Lys Leu Leu Glu Met Met Glu Glu
 545 550 555 560
 Val Gln Ser Leu Gln Glu Lys Ile Asp Glu Arg His His Ser Gln Gln
 565 570 575
 Ala Pro Gln Ala Glu Ala Pro Cys Leu Leu Arg Asn Ser Ala Arg Leu
 580 585 590
 Ser Ser Leu Phe Pro Phe Ala Leu Leu Gln Arg His Ser Ser Lys Pro
 595 600 605
 Val Leu Pro Thr Ser Gly Trp Lys Ala Leu Gly Asp Glu Asp Asp Leu
 610 615 620
 Ala Lys Arg Glu Asp Glu Phe Val Asp Leu Gly Asp Val *
 625 630 635 637

<210> 1163
 <211> 251
 <212> PRT
 <213> Homo sapiens

<400> 1163
 Met Ser Asp Ile Gly Asp Trp Phe Arg Ser Ile Pro Ala Ile Thr Arg
 1 5 10 15
 Tyr Trp Phe Ala Thr Val Ala Val Pro Leu Val Gly Lys Leu Gly
 20 25 30
 Leu Ile Ser Pro Ala Tyr Leu Phe Leu Trp Pro Glu Ala Phe Leu Tyr
 35 40 45
 Arg Phe Gln Ile Trp Arg Pro Ile Thr Ala Thr Phe Tyr Phe Pro Val
 50 55 60
 Gly Pro Gly Thr Gly Phe Leu Tyr Leu Val Asn Leu Tyr Phe Leu Tyr
 65 70 75 80
 Gln Tyr Ser Thr Arg Leu Glu Thr Gly Ala Phe Asp Gly Arg Pro Ala
 85 90 95
 Asp Tyr Leu Phe Met Leu Leu Phe Asn Trp Ile Cys Ile Val Ile Thr
 100 105 110
 Gly Leu Ala Met Asp Met Gln Leu Leu Met Ile Pro Leu Ile Met Ser
 115 120 125
 Val Leu Tyr Val Trp Ala Gln Leu Asn Arg Asp Met Ile Val Ser Phe
 130 135 140
 Trp Phe Gly Thr Arg Phe Lys Ala Cys Tyr Leu Pro Trp Val Ile Leu
 145 150 155 160

Gly Phe Asn Tyr Ile Ile Gly Gly Ser Val Ile Asn Glu Leu Ile Gly
 165 170 175
 Asn Leu Val Gly His Leu Tyr Phe Phe Leu Met Phe Arg Tyr Pro Met
 180 185 190
 Asp Leu Gly Gly Arg Asn Phe Leu Ser Thr Pro Gln Phe Leu Tyr Arg
 195 200 205
 Trp Leu Pro Ser Arg Arg Gly Gly Val Ser Gly Phe Gly Val Pro Pro
 210 215 220
 Ala Ser Met Arg Arg Ala Ala Asp Gln Asn Gly Gly Gly Gly Arg His
 225 230 235 240
 Asn Trp Gly Gln Gly Phe Arg Leu Gly Asp Gln
 245 250 251

<210> 1164

<211> 273

<212> PRT

<213> Homo sapiens

<400> 1164

Met Ala Phe Leu Ala Gly Pro Arg Leu Leu Asp Trp Ala Ser Ser Pro
 1 5 10 15
 Pro His Leu Gln Phe Asn Lys Phe Val Leu Thr Gly Tyr Arg Pro Ala
 20 25 30
 Ser Ser Gly Ser Gly Cys Leu Arg Ser Leu Phe Tyr Leu His Asn Glu
 35 40 45
 Leu Gly Asn Ile Tyr Thr His Gly Leu Ala Leu Leu Gly Phe Leu Val
 50 55 60
 Leu Val Pro Met Thr Met Pro Trp Gly Gln Leu Gly Lys Asp Gly Trp
 65 70 75 80
 Leu Gly Gly Thr His Cys Val Ala Cys Leu Ala Pro Pro Ala Gly Ser
 85 90 95
 Val Leu Tyr His Leu Phe Met Cys His Gln Gly Gly Ser Ala Val Tyr
 100 105 110
 Ala Arg Leu Leu Ala Leu Asp Met Cys Gly Val Cys Leu Val Asn Thr
 115 120 125
 Leu Gly Ala Leu Pro Ile Ile His Cys Thr Leu Ala Cys Arg Pro Trp
 130 135 140
 Leu Arg Pro Ala Ala Leu Val Gly Tyr Thr Val Leu Ser Gly Val Ala
 145 150 155 160
 Gly Trp Arg Ala Leu Thr Ala Pro Ser Thr Ser Ala Arg Leu Arg Ala
 165 170 175
 Phe Gly Trp Gln Ala Ala Ala Arg Leu Leu Val Phe Gly Ala Arg Gly
 180 185 190
 Val Gly Leu Gly Ser Gly Ala Pro Gly Ser Leu Pro Cys Tyr Leu Arg
 195 200 205
 Met Asp Ala Leu Ala Leu Leu Gly Gly Leu Val Asn Val Ala Arg Leu
 210 215 220
 Pro Glu Arg Trp Gly Pro Gly Arg Phe Asp Tyr Trp Gly Asn Ser His
 225 230 235 240
 Gln Ile Met His Leu Leu Ser Val Gly Ser Ile Leu Gln Leu His Ala
 245 250 255
 Gly Val Val Pro Asp Leu Leu Trp Ala Ala His His Ala Cys Pro Arg
 260 265 270
 Asp
 273

<210> 1165

<211> 798

<212> PRT

<213> Homo sapiens

<400> 1165

```

Met His Glu Ile Tyr Lys Gly Asn Ile Thr Pro Gln Leu Asn Lys Asn
 1      5      10      15
Thr Leu Lys Thr Ser Ala Ala Thr Asp Val Trp Ala Val Tyr Phe Ser
 20      25      30
Gln Phe Trp Ile Asp Tyr Glu Gly Met Lys Ser Gly Lys Gly Arg Pro
 35      40      45
Ile Ser Phe Val Asp Ser Phe Pro Leu Ser Ile Trp Ile Cys Gln Pro
 50      55      60
Thr Arg Tyr Ala Glu Ser Gln Lys Glu Pro Gln Thr Cys Asn Gln Val
 65      70      75      80
Ser Leu Asn Thr Ser Gln Ser Glu Ser Ser Asp Leu Ala Gly Arg Leu
 85      90      95
Lys Arg Lys Lys Leu Leu Lys Glu Tyr Tyr Ser Thr Glu Ser Glu Pro
100      105      110
Leu Thr Asn Gly Gly Gln Lys Pro Ser Ser Ser Asp Thr Phe Phe Arg
115      120      125
Phe Ser Pro Ser Ser Ser Glu Ala Asp Ile His Leu Leu Val His Val
130      135      140
His Lys His Val Ser Met Gln Ile Asn His Tyr Gln Tyr Leu Leu Leu
145      150      155      160
Leu Phe Leu His Glu Ser Leu Ile Leu Leu Ser Glu Asn Leu Arg Lys
165      170      175
Asp Val Glu Ala Val Thr Gly Ser Pro Ala Ser Gln Thr Ser Ile Cys
180      185      190
Ile Gly Ile Leu Leu Arg Ser Ala Glu Leu Ala Leu Leu His Pro
195      200      205
Val Asp Gln Ala Asn Thr Leu Lys Ser Pro Val Ser Glu Ser Val Ser
210      215      220
Pro Val Val Pro Asp Tyr Leu Pro Thr Glu Asn Gly Asp Phe Leu Ser
225      230      235      240
Ser Lys Arg Lys Gln Ile Ser Arg Asp Ile Asn Arg Ile Arg Ser Val
245      250      255
Thr Val Asn His Met Ser Asp Asn Arg Ser Met Ser Val Asp Leu Ser
260      265      270
His Ile Pro Leu Lys Asp Pro Leu Leu Phe Lys Ser Ala Ser Asp Thr
275      280      285
Asn Leu Gln Lys Gly Ile Ser Phe Met Asp Tyr Leu Ser Asp Lys His
290      295      300
Leu Gly Lys Ile Ser Glu Asp Glu Ser Ser Gly Leu Val Tyr Lys Ser
305      310      315      320
Gly Ser Gly Glu Ile Gly Ser Glu Thr Ser Asp Lys Lys Asp Ser Phe
325      330      335
Tyr Thr Asp Ser Ser Ser Val Leu Asn Tyr Arg Glu Asp Ser Asn Ile
340      345      350
Leu Ser Phe Asp Ser Asp Gly Asn Gln Asn Ile Leu Ser Ser Thr Leu
355      360      365
Thr Ser Lys Gly Asn Glu Thr Ile Glu Ser Ile Phe Lys Ala Glu Asp
370      375      380
Leu Leu Pro Glu Ala Ala Ser Leu Ser Glu Asn Leu Asp Ile Ser Lys
385      390      395      400
Glu Glu Thr Pro Pro Val Arg Thr Leu Lys Ser Gln Ser Ser Leu Ser
405      410      415
Gly Lys Pro Lys Glu Arg Cys Pro Pro Asn Leu Ala Pro Leu Cys Val
420      425      430
Ser Tyr Lys Asn Met Lys Arg Ser Ser Ser Gln Met Ser Leu Asp Thr
435      440      445
Ile Ser Leu Asp Ser Met Ile Leu Glu Glu Gln Leu Leu Glu Ser Asp
450      455      460
Gly Ser Asp Ser His Met Phe Leu Glu Lys Gly Asn Lys Lys Asn Ser
465      470      475      480

```

```

Thr Thr Asn Tyr Arg Gly Thr Ala Glu Ser Val Asn Ala Gly Ala Asn
      485      490      495
Leu Gln Asn Tyr Gly Glu Thr Ser Pro Asp Ala Ile Ser Thr Asn Ser
      500      505      510
Glu Gly Ala Gln Glu Asn His Asp Asp Leu Met Ser Val Val Val Phe
      515      520      525
Lys Ile Thr Gly Val Asn Gly Glu Ile Asp Ile Arg Gly Glu Asp Thr
      530      535      540
Glu Ile Cys Leu Gln Val Asn Gln Val Thr Pro Asp Gln Leu Gly Asn
      545      550      555      560
Ile Ser Leu Arg His Tyr Leu Cys Asn Arg Pro Val Gly Ser Asp Gln
      565      570      575
Lys Ala Val Ile His Ser Lys Ser Ser Pro Glu Ile Ser Leu Arg Phe
      580      585      590
Glu Ser Gly Pro Gly Ala Val Ile His Ser Leu Leu Ala Glu Lys Asn
      595      600      605
Gly Phe Leu Gln Cys His Ile Glu Asn Phe Ser Thr Glu Phe Leu Thr
      610      615      620
Ser Ser Leu Met Asn Ile Gln His Phe Leu Glu Asp Glu Thr Val Ala
      625      630      635      640
Thr Val Met Pro Met Lys Ile Gln Val Ser Asn Thr Lys Ile Asn Leu
      645      650      655
Lys Asp Asp Ser Pro Arg Ser Ser Thr Val Ser Leu Glu Pro Ala Pro
      660      665      670
Val Thr Val His Ile Asp His Leu Val Val Glu Arg Ser Asp Asp Gly
      675      680      685
Ser Phe His Ile Arg Asp Ser His Met Leu Asn Thr Gly Asn Asp Leu
      690      695      700
Lys Glu Asn Val Lys Ser Asp Ser Val Leu Leu Thr Ser Gly Lys Tyr
      705      710      715      720
Asp Leu Lys Lys Gln Arg Ser Val Thr Gln Ala Thr Gln Thr Ser Pro
      725      730      735
Gly Val Pro Trp Pro Ser Gln Ser Ala Asn Phe Pro Glu Phe Ser Phe
      740      745      750
Asp Phe Thr Arg Glu Gln Leu Met Glu Glu Asn Glu Ser Leu Lys Gln
      755      760      765
Glu Leu Ala Lys Ala Lys Met Ala Leu Ala Glu Ala His Leu Glu Lys
      770      775      780
Asp Ala Leu Leu His His Ile Lys Lys Met Thr Val Glu *
      785      790      795      797

```

```

<210> 1166
<211> 502
<212> PRT
<213> Homo sapiens

```

```

<400> 1166
Met Asp Tyr Asp Phe Lys Ala Lys Leu Ala Ala Glu Arg Glu Arg Val
  1      5      10      15
Glu Asp Leu Phe Glu Tyr Glu Gly Cys Lys Val Gly Arg Gly Thr Tyr
      20      25      30
Gly His Val Tyr Lys Ala Arg Arg Lys Asp Gly Lys Asp Glu Lys Glu
      35      40      45
Tyr Ala Leu Lys Gln Ile Glu Gly Thr Gly Ile Ser Met Ser Ala Cys
      50      55      60
Arg Glu Ile Ala Leu Leu Arg Glu Leu Lys His Pro Asn Val Ile Ala
      65      70      75      80
Leu Gln Lys Val Phe Leu Ser His Ser Asp Arg Lys Val Trp Leu Leu
      85      90      95
Phe Asp Tyr Ala Glu His Asp Leu Trp His Ile Ile Lys Phe His Arg
      100      105      110

```

Ala Ser Lys Ala Asn Lys Lys Pro Met Gln Leu Pro Arg Ser Met Val
 115 120 125
 Lys Ser Leu Leu Tyr Gln Ile Leu Asp Gly Ile His Tyr Leu His Ala
 130 135 140
 Asn Trp Val Leu His Arg Asp Leu Lys Pro Ala Asn Ile Leu Val Met
 145 150 155 160
 Gly Glu Gly Pro Glu Arg Gly Arg Val Lys Ile Ala Asp Met Gly Phe
 165 170 175
 Ala Arg Leu Phe Asn Ser Pro Leu Lys Pro Leu Ala Asp Leu Asp Pro
 180 185 190
 Val Val Val Thr Phe Trp Tyr Arg Ala Pro Glu Leu Leu Leu Gly Ala
 195 200 205
 Arg His Tyr Thr Lys Ala Ile Asp Ile Trp Ala Ile Gly Cys Ile Phe
 210 215 220
 Ala Glu Leu Leu Thr Ser Glu Pro Ile Phe His Cys Arg Gln Glu Asp
 225 230 235 240
 Ile Lys Thr Ser Asn Pro Phe His His Asp Gln Leu Asp Arg Ile Phe
 245 250 255
 Ser Val Met Gly Phe Pro Ala Asp Lys Asp Trp Glu Asp Ile Arg Lys
 260 265 270
 Met Pro Glu Tyr Pro Thr Leu Gln Lys Asp Phe Arg Arg Thr Thr Tyr
 275 280 285
 Ala Asn Ser Ser Leu Ile Lys Tyr Met Glu Lys His Lys Val Lys Pro
 290 295 300
 Asp Ser Lys Val Phe Leu Leu Leu Gln Lys Leu Leu Thr Met Asp Pro
 305 310 315 320
 Thr Lys Arg Ile Thr Ser Glu Gln Ala Leu Gln Asp Pro Tyr Phe Gln
 325 330 335
 Glu Asp Pro Leu Pro Thr Leu Asp Val Phe Ala Gly Cys Gln Ile Pro
 340 345 350
 Tyr Pro Lys Arg Glu Phe Leu Asn Glu Asp Asp Pro Glu Glu Lys Gly
 355 360 365
 Asp Lys Asn Gln Gln Gln Gln Gln Asn Gln His Gln Gln Pro Thr Ala
 370 375 380
 Pro Pro Gln Gln Ala Ala Ala Pro Pro Gln Ala Pro Pro Pro Gln Gln
 385 390 395 400
 Asn Ser Thr Gln Thr Asn Gly Thr Ala Gly Gly Ala Gly Ala Gly Val
 405 410 415
 Gly Gly Thr Gly Ala Gly Leu Gln His Ser Gln Asp Ser Ser Leu Asn
 420 425 430
 Gln Val Pro Pro Asn Lys Lys Pro Arg Leu Gly Pro Ser Gly Ala Asn
 435 440 445
 Ser Gly Gly Pro Val Met Pro Ser Asp Tyr Gln His Ser Ser Ser Arg
 450 455 460
 Leu Asn Tyr Gln Ser Ser Val Gln Gly Ser Ser Gln Ser Gln Ser Thr
 465 470 475 480
 Leu Gly Tyr Ser Ser Ser Gln Gln Ser Ser Gln Tyr His Pro Ser
 485 490 495
 His Gln Ala His Arg Tyr
 500 502

<210> 1167

<211> 476

<212> PRT

<213> Homo sapiens

<400> 1167

Met Ala Glu Pro Pro Ser Pro Val His Cys Val Ala Ala Ala Ala Pro
 1 5 10 15
 Thr Ala Thr Val Ser Glu Lys Glu Pro Phe Gly Lys Leu Gln Leu Ser
 20 25 30

Ser Arg Asp Pro Pro Gly Ser Leu Ser Ala Lys Lys Val Arg Thr Glu
 35 40 45
 Glu Lys Lys Ala Pro Arg Arg Val Asn Gly Glu Gly Gly Ser Gly Gly
 50 55 60
 Asn Ser Arg Gln Leu Gln Pro Pro Ala Ala Pro Ser Pro Gln Ser Tyr
 65 70 75 80
 Gly Ser Pro Ala Ser Trp Ser Phe Ala Pro Leu Ser Ala Ala Pro Ser
 85 90 95
 Pro Ser Ser Ser Arg Ser Ser Phe Ser Phe Ser Ala Gly Thr Ala Val
 100 105 110
 Pro Ser Ser Ala Ser Ala Ser Leu Ser Gln Pro Val Pro Arg Lys Leu
 115 120 125
 Leu Val Pro Pro Thr Leu Leu His Ala Gln Pro His His Leu Leu Leu
 130 135 140
 Pro Ala Ala Ala Ala Ala Ser Ala Asn Ala Lys Ser Arg Arg Pro
 145 150 155 160
 Lys Glu Lys Arg Glu Lys Glu Arg Arg Arg His Gly Leu Gly Gly Ala
 165 170 175
 Arg Glu Ala Gly Gly Ala Ser Arg Glu Glu Asn Gly Glu Val Lys Pro
 180 185 190
 Leu Pro Arg Asp Lys Ile Lys Asp Lys Ile Lys Glu Arg Asp Lys Glu
 195 200 205
 Lys Glu Arg Glu Lys Lys Lys His Lys Val Met Asn Glu Ile Lys Lys
 210 215 220
 Glu Asn Gly Glu Val Lys Ile Leu Leu Lys Ser Gly Lys Glu Lys Pro
 225 230 235 240
 Lys Thr Asn Ile Glu Asp Leu Gln Ile Lys Lys Val Lys Lys Lys Lys
 245 250 255
 Lys Lys Lys His Lys Glu Asn Glu Lys Arg Lys Arg Pro Lys Met Tyr
 260 265 270
 Ser Lys Ser Ile Gln Thr Ile Cys Ser Gly Leu Leu Thr Asp Val Glu
 275 280 285
 Asp Gln Ala Ala Lys Gly Ile Leu Asn Asp Asn Ile Lys Asp Tyr Val
 290 295 300
 Gly Lys Asn Leu Asp Thr Lys Asn Tyr Asp Ser Lys Ile Pro Glu Asn
 305 310 315 320
 Ser Glu Phe Pro Phe Val Ser Leu Lys Glu Pro Arg Val Gln Asn Asn
 325 330 335
 Leu Lys Arg Leu Asp Thr Leu Glu Phe Lys Gln Leu Ile His Ile Glu
 340 345 350
 His Gln Pro Asn Gly Gly Ala Ser Val Ile His Ala Tyr Ser Asn Glu
 355 360 365
 Leu Ser His Leu Ser Pro Met Glu Met Glu Arg Phe Ala Glu Glu Phe
 370 375 380
 Val Gly Leu Val Phe Ser Glu Asn Glu Asn Ser Ala Ala Phe Tyr Val
 385 390 395 400
 Met Gly Ile Val His Gly Ala Ala Thr Tyr Leu Pro Asp Phe Leu Asp
 405 410 415
 Tyr Phe Ser Phe Asn Phe Pro Asn Ser Pro Val Lys Met Glu Ile Leu
 420 425 430
 Gly Lys Lys Asp Ile Glu Thr Thr Thr Met Ser Asn Phe His Ala Gln
 435 440 445
 Ser Leu Thr Val Leu Gln Pro Gly Arg Gln Ser Glu Thr Pro Ser Gln
 450 455 460
 Lys Lys Arg Lys Lys Phe Met Ile Met Leu Ser Ser
 465 470 475 476

<210> 1168

<211> 250

<212> PRT

<213> Homo sapiens

<400> 1168
 Met Ser Ile Phe Thr Pro Thr Asn Gln Ile Arg Leu Thr Asn Val Ala
 1 5 10 15
 Val Val Arg Met Lys Arg Ala Gly Lys Arg Phe Glu Ile Ala Cys Tyr
 20 25 30
 Lys Asn Lys Val Val Gly Trp Arg Ser Gly Val Glu Lys Asp Leu Asp
 35 40 45
 Glu Val Leu Gln Thr His Ser Val Phe Val Asn Val Ser Lys Gly Gln
 50 55 60
 Val Ala Lys Lys Glu Asp Leu Ile Ser Ala Phe Gly Thr Asp Asp Gln
 65 70 75 80
 Thr Glu Ile Cys Lys Gln Ile Leu Thr Lys Gly Glu Val Gln Val Ser
 85 90 95
 Asp Lys Glu Arg His Thr Gln Leu Glu Gln Met Phe Arg Asp Ile Ala
 100 105 110
 Thr Ile Val Ala Asp Lys Cys Val Asn Pro Glu Thr Lys Arg Pro Tyr
 115 120 125
 Thr Val Ile Leu Ile Glu Arg Ala Met Lys Asp Ile His Tyr Ser Val
 130 135 140
 Lys Thr Asn Lys Ser Thr Lys Gln Gln Ala Leu Glu Val Ile Lys Gln
 145 150 155 160
 Leu Lys Glu Lys Met Lys Ile Glu Arg Ala His Met Arg Leu Arg Phe
 165 170 175
 Ile Leu Pro Val Asn Glu Gly Lys Lys Leu Lys Glu Lys Leu Lys Pro
 180 185 190
 Leu Ile Lys Val Ile Glu Ser Glu Asp Tyr Gly Gln Gln Leu Glu Ile
 195 200 205
 Val Cys Leu Ile Asp Pro Gly Cys Phe Arg Glu Ile Asp Glu Leu Ile
 210 215 220
 Lys Lys Glu Thr Lys Gly Lys Gly Ser Leu Glu Val Leu Asn Leu Lys
 225 230 235 240
 Asp Val Glu Glu Gly Asp Glu Lys Phe Glu
 245 250

<210> 1169
 <211> 1048
 <212> PRT
 <213> Homo sapiens

<400> 1169
 Met Val Glu Gly Lys Arg His Val Leu His Gly Gly Arg Gln Glu Arg
 1 5 10 15
 Met Arg Ala Lys Gln Lys Gly Lys Pro Leu Ile Lys Ser Ser Asp Leu
 20 25 30
 Val Arg Leu Ile His Tyr His His Asn Ser Ser Pro Leu His Lys Gln
 35 40 45
 Ser Ser Gly Pro Ser Ser Ser Pro Ala Ala Ala Ala Pro Glu Lys
 50 55 60
 Pro Gly Pro Lys Ala Ala Glu Val Gly Asp Asp Phe Leu Gly Asp Phe
 65 70 75 80
 Val Val Gly Glu Arg Val Trp Val Asn Gly Val Lys Pro Gly Val Val
 85 90 95
 Gln Tyr Leu Gly Glu Thr Gln Phe Ala Pro Gly Gln Trp Ala Gly Val
 100 105 110
 Val Leu Asp Asp Pro Val Gly Lys Asn Asp Gly Ala Val Gly Gly Val
 115 120 125
 Arg Tyr Phe Glu Cys Pro Ala Leu Gln Gly Ile Phe Thr Arg Pro Ser
 130 135 140
 Lys Leu Thr Arg Gln Pro Thr Ala Glu Gly Ser Gly Ser Asp Ala His
 145 150 155 160

Ser	Val	Glu	Ser	Leu	Thr	Ala	Gln	Asn	Leu	Ser	Leu	His	Ser	Gly	Thr
				165					170					175	
Ala	Thr	Pro	Pro	Leu	Thr	Ser	Arg	Val	Ile	Pro	Leu	Arg	Glu	Ser	Val
			180					185					190		
Leu	Asn	Ser	Ser	Val	Lys	Thr	Gly	Asn	Glu	Ser	Gly	Ser	Asn	Leu	Ser
		195					200					205			
Asp	Ser	Gly	Ser	Val	Lys	Arg	Gly	Glu	Lys	Asp	Leu	Arg	Leu	Gly	Asp
	210					215					220				
Arg	Val	Leu	Val	Gly	Gly	Thr	Lys	Thr	Gly	Val	Val	Arg	Tyr	Val	Gly
225					230					235					240
Glu	Thr	Asp	Phe	Ala	Lys	Gly	Glu	Trp	Cys	Gly	Val	Glu	Leu	Asp	Glu
			245						250					255	
Pro	Leu	Gly	Lys	Asn	Asp	Gly	Ala	Val	Ala	Gly	Thr	Arg	Tyr	Phe	Gln
			260					265					270		
Cys	Pro	Pro	Lys	Phe	Gly	Leu	Phe	Ala	Pro	Ile	His	Lys	Val	Ile	Arg
		275					280					285			
Ile	Gly	Phe	Pro	Ser	Thr	Ser	Pro	Ala	Lys	Ala	Lys	Lys	Thr	Lys	Arg
	290					295					300				
Met	Ala	Met	Gly	Val	Ser	Ala	Leu	Thr	His	Ser	Pro	Ser	Ser	Ser	Ser
305					310						315				320
Ile	Ser	Ser	Val	Ser	Ser	Val	Ala	Ser	Ser	Val	Gly	Gly	Arg	Pro	Ser
				325						330				335	
Arg	Ser	Gly	Leu	Leu	Thr	Glu	Thr	Ser	Ser	Arg	Tyr	Ala	Arg	Lys	Ile
			340					345					350		
Ser	Gly	Thr	Thr	Ala	Leu	Gln	Glu	Ala	Leu	Lys	Glu	Lys	Gln	Gln	His
		355					360					365			
Ile	Glu	Gln	Leu	Leu	Ala	Glu	Arg	Asp	Leu	Glu	Arg	Ala	Glu	Val	Ala
	370					375					380				
Lys	Ala	Thr	Ser	His	Ile	Cys	Glu	Val	Glu	Lys	Glu	Ile	Ala	Leu	Leu
385					390					395					400
Lys	Ala	Gln	His	Glu	Gln	Tyr	Val	Ala	Glu	Ala	Glu	Glu	Lys	Leu	Gln
				405					410					415	
Arg	Ala	Arg	Leu	Leu	Val	Glu	Ser	Val	Arg	Lys	Glu	Lys	Val	Asp	Leu
			420					425					430		
Ser	Asn	Gln	Leu	Glu	Glu	Glu	Arg	Arg	Lys	Val	Glu	Asp	Leu	Gln	Phe
		435					440					445			
Arg	Val	Glu	Glu	Glu	Ser	Ile	Thr	Lys	Gly	Asp	Leu	Glu	Thr	Gln	Thr
	450					455					460				
Gln	Leu	Glu	His	Ala	Arg	Ile	Gly	Glu	Leu	Glu	Gln	Ser	Leu	Leu	Leu
465					470					475					480
Glu	Lys	Ala	Gln	Ala	Glu	Arg	Leu	Leu	Arg	Glu	Leu	Ala	Asp	Asn	Arg
				485						490				495	
Leu	Thr	Thr	Val	Ala	Glu	Lys	Ser	Arg	Val	Leu	Gln	Leu	Glu	Glu	Glu
			500					505				510			
Leu	Thr	Leu	Arg	Arg	Gly	Glu	Ile	Glu	Glu	Leu	Gln	Gln	Cys	Leu	Leu
		515					520					525			
His	Ser	Gly	Pro	Pro	Pro	Pro	Asp	His	Pro	Asp	Ala	Ala	Glu	Ile	Leu
	530					535					540				
Arg	Leu	Arg	Glu	Arg	Leu	Leu	Ser	Ala	Ser	Lys	Glu	His	Gln	Arg	Glu
545					550					555					560
Ser	Gly	Val	Leu	Arg	Asp	Lys	Tyr	Glu	Lys	Ala	Leu	Lys	Ala	Tyr	Gln
				565					570					575	
Ala	Glu	Val	Asp	Lys	Leu	Arg	Ala	Ala	Asn	Glu	Lys	Tyr	Ala	Gln	Glu
			580					585					590		
Val	Ala	Gly	Leu	Lys	Asp	Lys	Val	Gln	Gln	Ala	Thr	Ser	Glu	Asn	Met
		595					600					605			
Gly	Leu	Met	Asp	Asn	Trp	Lys	Ser	Lys	Leu	Asp	Ser	Leu	Ala	Ser	Asp
	610					615					620				
His	Gln	Lys	Ser	Leu	Glu	Asp	Leu	Lys	Ala	Thr	Leu	Asn	Ser	Gly	Pro
625					630					635					640
Gly	Ala	Gln	Gln	Lys	Glu	Ile	Gly	Glu	Leu	Lys	Ala	Val	Met	Glu	Gly
				645					650					655	
Ile	Lys	Met	Glu	His	Gln	Leu	Glu	Leu	Gly	Asn	Leu	Gln	Ala	Lys	His
			660					665						670	

```

Asp Leu Glu Thr Ala Met His Val Lys Glu Lys Glu Ala Leu Arg Glu
    675                      680                      685
Lys Leu Gln Glu Ala Gln Glu Glu Leu Ala Gly Leu Gln Arg His Trp
    690                      695                      700
Arg Ala Gln Leu Glu Val Gln Ala Ser Gln His Arg Leu Glu Leu Gln
    705                      710                      715                      720
Glu Ala Gln Asp Gln Arg Arg Asp Ala Glu Leu Arg Val His Glu Leu
    725                      730                      735
Glu Lys Leu Asp Val Glu Tyr Arg Gly Gln Ala Gln Ala Ile Glu Phe
    740                      745                      750
Leu Lys Glu Gln Ile Ser Leu Ala Glu Lys Lys Met Leu Asp Tyr Glu
    755                      760                      765
Arg Leu Gln Arg Ala Glu Ala Gln Gly Lys Gln Glu Val Glu Ser Leu
    770                      775                      780
Arg Glu Lys Leu Leu Val Ala Glu Asn Arg Leu Gln Ala Val Glu Ala
    785                      790                      795                      800
Leu Cys Ser Ser Gln His Thr His Met Ile Glu Ser Asn Asp Ile Ser
    805                      810                      815
Glu Glu Thr Ile Arg Thr Lys Glu Thr Val Glu Gly Leu Gln Asp Lys
    820                      825                      830
Leu Asn Lys Arg Asp Lys Glu Val Thr Ala Leu Thr Ser Gln Thr Glu
    835                      840                      845
Met Leu Arg Ala Gln Val Ser Ala Leu Glu Ser Lys Cys Lys Ser Gly
    850                      855                      860
Glu Lys Lys Val Asp Ala Leu Leu Lys Glu Lys Arg Arg Leu Glu Ala
    865                      870                      875                      880
Glu Leu Glu Thr Val Ser Arg Lys Thr His Asp Ala Ser Gly Gln Leu
    885                      890                      895
Val Leu Ile Ser Gln Glu Leu Leu Arg Lys Glu Arg Ser Leu Asn Glu
    900                      905                      910
Leu Arg Val Leu Leu Leu Glu Ala Asn Arg His Ser Pro Gly Pro Glu
    915                      920                      925
Arg Asp Leu Ser Arg Glu Val His Lys Ala Glu Trp Arg Ile Lys Glu
    930                      935                      940
Gln Lys Leu Lys Asp Asp Ile Arg Gly Leu Arg Glu Lys Leu Thr Gly
    945                      950                      955                      960
Leu Asp Lys Glu Lys Ser Leu Ser Asp Gln Arg Arg Tyr Ser Leu Ile
    965                      970                      975
Asp Pro Ser Ser Ala Pro Glu Leu Leu Arg Leu Gln His Gln Leu Met
    980                      985                      990
Ser Thr Glu Asp Ala Leu Arg Asp Ala Leu Asp Gln Ala Gln Gln Val
    995                      1000                      1005
Glu Lys Leu Met Glu Ala Met Arg Ser Cys Pro Asp Lys Ala Gln Thr
    1010                      1015                      1020
Ile Gly Asn Ser Gly Ser Ala Asn Gly Ile His Gln Gln Asp Lys Ala
    1025                      1030                      1035                      1040
Gln Lys Gln Glu Asp Lys His *
    1045                      1047

```

<210> 1170

<211> 778

<212> PRT

<213> Homo sapiens

<400> 1170

```

Met Ser Gly Ser His Thr Pro Ala Cys Gly Pro Phe Ser Ala Leu Thr
    1                      5                      10                      15
Pro Ser Ile Trp Pro Gln Glu Ile Leu Ala Lys Tyr Thr Gln Lys Glu
    20                      25                      30
Glu Ser Ala Glu Gln Pro Glu Phe Tyr Tyr Asp Glu Phe Gly Phe Arg
    35                      40                      45

```


Val	Tyr	Lys	Glu	Glu	Gly	Asp	Glu	Pro	Gly	Ser	Ser	Leu	Leu	Ala	Asn				
50						55					60								
Ser	Pro	Leu	Met	Glu	Asp	Ala	Pro	Gln	Arg	Leu	Arg	Trp	Gln	Ala	His				
65					70					75					80				
Leu	Glu	Phe	Thr	His	Asn	His	Asp	Val	Gly	Asp	Leu	Thr	Trp	Asp	Lys				
				85					90					95					
Ile	Ala	Val	Ser	Leu	Pro	Arg	Ser	Glu	Lys	Leu	Arg	Ser	Leu	Val	Leu				
			100					105					110						
Ala	Gly	Ile	Pro	His	Gly	Met	Arg	Pro	Gln	Leu	Trp	Met	Arg	Leu	Ser				
	115						120					125							
Gly	Ala	Leu	Gln	Lys	Lys	Arg	Asn	Ser	Glu	Leu	Ser	Tyr	Arg	Glu	Ile				
130						135					140								
Val	Lys	Asn	Ser	Ser	Asn	Asp	Glu	Thr	Ile	Ala	Lys	Gln	Ile	Glu					
145					150					155				160					
Lys	Asp	Leu	Leu	Arg	Thr	Met	Pro	Ser	Asn	Ala	Cys	Phe	Ala	Ser	Met				
				165					170				175						
Gly	Ser	Ile	Gly	Val	Pro	Arg	Leu	Arg	Arg	Val	Leu	Arg	Ala	Leu	Ala				
			180					185					190						
Trp	Leu	Tyr	Pro	Glu	Ile	Gly	Tyr	Cys	Gln	Gly	Thr	Gly	Met	Val	Ala				
	195						200					205							
Ala	Cys	Leu	Leu	Leu	Phe	Leu	Glu	Glu	Glu	Asp	Ala	Phe	Trp	Met	Met				
	210					215				220									
Ser	Ala	Ile	Ile	Glu	Asp	Leu	Leu	Pro	Ala	Ser	Tyr	Phe	Ser	Thr	Thr				
225					230					235				240					
Leu	Leu	Gly	Val	Gln	Thr	Asp	Gln	Arg	Val	Leu	Arg	His	Leu	Ile	Val				
			245					250					255						
Gln	Tyr	Leu	Pro	Arg	Leu	Asp	Lys	Leu	Leu	Gln	Glu	His	Asp	Ile	Glu				
	260						265					270							
Leu	Ser	Leu	Ile	Thr	Leu	His	Trp	Phe	Leu	Thr	Ala	Phe	Ala	Ser	Val				
	275					280						285							
Val	Asp	Ile	Lys	Leu	Leu	Leu	Arg	Ile	Trp	Asp	Leu	Phe	Phe	Tyr	Glu				
	290					295				300									
Gly	Ser	Arg	Val	Leu	Phe	Gln	Leu	Thr	Leu	Gly	Met	Leu	His	Leu	Lys				
305					310					315				320					
Glu	Glu	Glu	Leu	Ile	Gln	Ser	Glu	Asn	Ser	Ala	Ser	Ile	Phe	Asn	Thr				
			325					330					335						
Leu	Ser	Asp	Ile	Pro	Ser	Gln	Met	Glu	Asp	Ala	Glu	Leu	Leu	Leu	Gly				
		340						345				350							
Val	Ala	Met	Arg	Leu	Ala	Gly	Ser	Leu	Thr	Asp	Val	Ala	Val	Glu	Thr				
	355					360					365								
Gln	Arg	Arg	Lys	His	Leu	Ala	Tyr	Leu	Ile	Ala	Asp	Gln	Gly	Gln	Leu				
	370					375					380								
Leu	Gly	Ala	Gly	Thr	Leu	Thr	Asn	Leu	Ser	Gln	Val	Val	Arg	Arg	Arg				
385					390					395				400					
Thr	Gln	Arg	Arg	Lys	Ser	Thr	Ile	Thr	Ala	Leu	Leu	Phe	Gly	Glu	Asp				
			405					410					415						
Asp	Leu	Glu	Ala	Leu	Lys	Ala	Lys	Asn	Ile	Lys	Gln	Thr	Glu	Leu	Val				
		420						425					430						
Ala	Asp	Leu	Arg	Glu	Ala	Ile	Leu	Arg	Val	Ala	Arg	His	Phe	Gln	Cys				
	435					440						445							
Thr	Asp	Pro	Lys	Asn	Cys	Ser	Val	Val	Ser	Arg	Gln	Leu	Pro	Gly	Leu				
	450					455					460								
Leu	Pro	Asn	Thr	Ala	Leu	Thr	Pro	Pro	Thr	Pro	Leu	Val	Gly	Leu	Cys				
465					470					475				480					
Ser	Leu	Trp	Gln	Glu	Leu	Thr	Pro	Asp	Tyr	Ser	Met	Glu	Ser	His	Gln				
			485					490					495						
Arg	Asp	His	Glu	Asn	Tyr	Val	Ala	Cys	Ser	Arg	Ser	His	Arg	Arg	Arg				
		500						505				510							
Ala	Lys	Ala	Leu	Leu	Asp	Phe	Glu	Arg	His	Asp	Asp	Asp	Glu	Leu	Gly				
	515					520					525								
Phe	Arg	Lys	Asn	Asp	Ile	Ile	Thr	Ile	Val	Ser	Gln	Lys	Asp	Glu	His				
	530					535					540								
Cys	Trp	Val	Gly	Glu	Leu	Asn	Gly	Leu	Arg	Gly	Trp	Phe	Pro	Ala	Lys				
545					550					555					560				

```

Phe Val Glu Val Leu Asp Glu Arg Ser Lys Glu Tyr Ser Ile Ala Gly
      565      570      575
Asp Asp Ser Val Thr Glu Gly Val Thr Asp Leu Val Arg Gly Thr Leu
      580      585      590
Cys Pro Ala Leu Lys Ala Leu Phe Glu His Gly Leu Lys Lys Pro Ser
      595      600      605
Leu Leu Gly Gly Ala Cys His Pro Trp Leu Phe Ile Glu Glu Ala Ala
      610      615      620
Gly Arg Glu Val Glu Arg Asp Phe Ala Ser Val Tyr Ser Arg Leu Val
      625      630      635      640
Leu Cys Lys Thr Phe Arg Leu Asp Glu Asp Gly Lys Val Leu Thr Pro
      645      650      655
Glu Glu Leu Leu Tyr Arg Ala Val Gln Ser Val Asn Val Thr His Asp
      660      665      670
Ala Val His Ala Gln Met Asp Val Lys Leu Arg Ser Leu Ile Cys Val
      675      680      685
Gly Leu Asn Glu Gln Val Leu His Leu Trp Leu Glu Val Leu Cys Ser
      690      695      700
Ser Leu Pro Thr Val Glu Lys Trp Tyr Gln Pro Trp Ser Phe Leu Arg
      705      710      715      720
Ser Pro Gly Trp Val Gln Ile Lys Cys Glu Leu Arg Val Leu Cys Cys
      725      730      735
Phe Ala Phe Ser Leu Ser Gln Asp Trp Glu Leu Pro Ala Lys Arg Glu
      740      745      750
Ala Gln Gln Pro Leu Lys Glu Gly Val Arg Asp Met Leu Val Lys His
      755      760      765
His Leu Phe Ser Trp Asp Val Asp Gly *
      770      775      777

```

<210> 1171
 <211> 750
 <212> PRT
 <213> Homo sapiens

```

      <400> 1171
Met Ser Gly Ser His Thr Pro Ala Cys Gly Pro Phe Ser Ala Leu Thr
  1      5      10      15
Pro Ser Ile Trp Pro Gln Glu Ile Leu Ala Lys Tyr Thr Gln Lys Glu
      20      25      30
Glu Ser Ala Glu Gln Pro Glu Phe Tyr Tyr Asp Glu Phe Gly Phe Arg
      35      40      45
Val Tyr Lys Glu Glu Gly Asp Glu Pro Gly Ser Ser Leu Leu Ala Asn
      50      55      60
Ser Pro Leu Met Glu Asp Ala Pro Gln Arg Leu Arg Trp Gln Ala His
      65      70      75      80
Leu Glu Phe Thr His Asn His Asp Val Gly Asp Leu Thr Trp Asp Lys
      85      90      95
Ile Ala Val Ser Leu Pro Arg Ser Glu Lys Leu Arg Ser Leu Val Leu
      100      105      110
Ala Gly Ile Pro His Gly Met Arg Pro Gln Leu Trp Met Arg Leu Ser
      115      120      125
Gly Ala Leu Gln Lys Lys Arg Asn Ser Glu Leu Ser Tyr Arg Glu Ile
      130      135      140
Val Lys Asn Ser Ser Asn Asp Glu Thr Ile Ala Ala Lys Gln Ile Glu
      145      150      155      160
Lys Asp Leu Leu Arg Thr Met Pro Ser Asn Ala Cys Phe Ala Ser Met
      165      170      175
Gly Ser Ile Gly Val Pro Arg Leu Arg Arg Val Leu Arg Ala Leu Ala
      180      185      190
Trp Leu Tyr Pro Glu Ile Gly Tyr Cys Gln Gly Thr Gly Met Val Ala
      195      200      205

```

Ala	Cys	Leu	Leu	Leu	Phe	Leu	Glu	Glu	Glu	Asp	Ala	Phe	Trp	Met	Met
210						215					220				
Ser	Ala	Ile	Ile	Glu	Asp	Leu	Leu	Pro	Ala	Ser	Tyr	Phe	Ser	Thr	Thr
225					230					235					240
Leu	Leu	Gly	Val	Gln	Thr	Asp	Gln	Arg	Val	Leu	Arg	His	Leu	Ile	Val
				245					250					255	
Gln	Tyr	Leu	Pro	Arg	Leu	Asp	Lys	Leu	Leu	Gln	Glu	His	Asp	Ile	Glu
			260					265					270		
Leu	Ser	Leu	Ile	Thr	Leu	His	Trp	Phe	Leu	Thr	Ala	Phe	Ala	Ser	Val
			275				280					285			
Val	Asp	Ile	Lys	Leu	Leu	Leu	Arg	Ile	Trp	Asp	Leu	Phe	Phe	Tyr	Glu
	290					295				300					
Gly	Ser	Arg	Val	Leu	Phe	Gln	Leu	Thr	Leu	Gly	Met	Leu	His	Leu	Lys
305					310					315					320
Glu	Glu	Glu	Leu	Ile	Gln	Ser	Glu	Asn	Ser	Ala	Ser	Ile	Phe	Asn	Thr
				325						330				335	
Leu	Ser	Asp	Ile	Pro	Ser	Gln	Met	Glu	Asp	Ala	Glu	Leu	Leu	Leu	Gly
			340					345					350		
Val	Ala	Met	Arg	Leu	Ala	Gly	Ser	Leu	Thr	Asp	Val	Ala	Val	Glu	Thr
		355					360					365			
Gln	Arg	Arg	Lys	His	Leu	Ala	Tyr	Leu	Ile	Ala	Asp	Gln	Gly	Gln	Leu
	370					375					380				
Leu	Gly	Ala	Gly	Thr	Leu	Thr	Asn	Leu	Ser	Gln	Val	Val	Arg	Arg	Arg
385					390					395					400
Thr	Gln	Arg	Arg	Lys	Ser	Thr	Ile	Thr	Ala	Leu	Leu	Phe	Gly	Glu	Asp
				405					410					415	
Asp	Leu	Glu	Ala	Leu	Lys	Ala	Lys	Asn	Ile	Lys	Gln	Thr	Glu	Leu	Val
			420					425					430		
Ala	Asp	Leu	Arg	Glu	Ala	Ile	Leu	Arg	Val	Ala	Arg	His	Phe	Gln	Cys
		435					440					445			
Thr	Asp	Pro	Lys	Asn	Cys	Ser	Val	Glu	Leu	Thr	Pro	Asp	Tyr	Ser	Met
	450					455					460				
Glu	Ser	His	Gln	Arg	Asp	His	Glu	Asn	Tyr	Val	Ala	Cys	Ser	Arg	Ser
465					470					475					480
His	Arg	Arg	Arg	Ala	Lys	Ala	Leu	Leu	Asp	Phe	Glu	Arg	His	Asp	Asp
				485					490					495	
Asp	Glu	Leu	Gly	Phe	Arg	Lys	Asn	Asp	Ile	Ile	Thr	Ile	Val	Ser	Gln
			500					505					510		
Lys	Asp	Glu	His	Cys	Trp	Val	Gly	Glu	Leu	Asn	Gly	Leu	Arg	Gly	Trp
	515						520					525			
Phe	Pro	Ala	Lys	Phe	Val	Glu	Val	Leu	Asp	Glu	Arg	Ser	Lys	Glu	Tyr
	530					535					540				
Ser	Ile	Ala	Gly	Asp	Asp	Ser	Val	Thr	Glu	Gly	Val	Thr	Asp	Leu	Val
545					550					555					560
Arg	Gly	Thr	Leu	Cys	Pro	Ala	Leu	Lys	Ala	Leu	Phe	Glu	His	Gly	Leu
				565					570					575	
Lys	Lys	Pro	Ser	Leu	Leu	Gly	Gly	Ala	Cys	His	Pro	Trp	Leu	Phe	Ile
			580					585					590		
Glu	Glu	Ala	Ala	Gly	Arg	Glu	Val	Glu	Arg	Asp	Phe	Ala	Ser	Val	Tyr
		595					600					605			
Ser	Arg	Leu	Val	Leu	Cys	Lys	Thr	Phe	Arg	Leu	Asp	Glu	Asp	Gly	Lys
	610					615					620				
Val	Leu	Thr	Pro	Glu	Glu	Leu	Leu	Tyr	Arg	Ala	Val	Gln	Ser	Val	Asn
625					630					635					640
Val	Thr	His	Asp	Ala	Val	His	Ala	Gln	Met	Asp	Val	Lys	Leu	Arg	Ser
				645					650					655	
Leu	Ile	Cys	Val	Gly	Leu	Asn	Glu	Gln	Val	Leu	His	Leu	Trp	Leu	Glu
			660					665					670		
Val	Leu	Cys	Ser	Ser	Leu	Pro	Thr	Val	Glu	Lys	Trp	Tyr	Gln	Pro	Trp
	675						680					685			
Ser	Phe	Leu	Arg	Ser	Pro	Gly	Trp	Val	Gln	Ile	Lys	Cys	Glu	Leu	Arg
	690					695					700				
Val	Leu	Cys	Cys	Phe	Ala	Phe	Ser	Leu	Ser	Gln	Asp	Trp	Glu	Leu	Pro
705					710					715					720

Ala Lys Arg Glu Ala Gln Gln Pro Leu Lys Glu Gly Val Arg Asp Met
725 730 735
Leu Val Lys His His Leu Phe Ser Trp Asp Val Asp Gly *
740 745 749

```
<210> 1172
<211> 1616
<212> PRT
<213> Homo sapiens
```

<400> 1172															
Met	Glu	Gly	Ala	Glu	Pro	Arg	Ala	Arg	Pro	Glu	Arg	Leu	Ala	Glu	Ala
1				5					10					15	
Glu	Thr	Arg	Ala	Ala	Asp	Gly	Gly	Arg	Leu	Val	Glu	Val	Gln	Leu	Ser
			20					25					30		
Gly	Gly	Ala	Pro	Trp	Gly	Phe	Thr	Leu	Lys	Gly	Gly	Arg	Glu	His	Gly
		35					40					45			
Glu	Pro	Leu	Val	Ile	Thr	Lys	Ile	Glu	Glu	Gly	Ser	Lys	Ala	Ala	Ala
	50					55					60				
Val	Asp	Lys	Leu	Leu	Ala	Gly	Asp	Glu	Ile	Val	Gly	Ile	Asn	Asp	Ile
65					70					75				80	
Gly	Leu	Ser	Gly	Phe	Arg	Gln	Glu	Ala	Ile	Cys	Leu	Val	Lys	Gly	Ser
			85						90					95	
His	Lys	Thr	Leu	Lys	Leu	Val	Val	Lys	Arg	Arg	Ser	Glu	Leu	Gly	Trp
			100					105					110		
Arg	Pro	His	Ser	Trp	His	Ala	Thr	Lys	Phe	Ser	Asp	Ser	His	Pro	Glu
	115						120					125			
Leu	Ala	Ala	Ser	Pro	Phe	Thr	Ser	Thr	Ser	Gly	Cys	Pro	Ser	Trp	Ser
	130					135					140				
Gly	Arg	His	His	Ala	Ser	Ser	Ser	Ser	His	Asp	Leu	Ser	Ser	Ser	Trp
145					150					155					160
Glu	Gln	Thr	Asn	Leu	Gln	Arg	Thr	Leu	Asp	His	Phe	Ser	Ser	Leu	Gly
			165						170					175	
Ser	Val	Asp	Ser	Leu	Asp	His	Pro	Ser	Ser	Arg	Leu	Ser	Val	Ala	Lys
			180					185					190		
Ser	Asn	Ser	Ser	Ile	Asp	His	Leu	Gly	Ser	His	Ser	Lys	Arg	Asp	Ser
	195						200					205			
Ala	Tyr	Gly	Ser	Phe	Ser	Thr	Ser	Ser	Ser	Thr	Pro	Asp	His	Thr	Leu
	210					215					220				
Ser	Lys	Ala	Asp	Thr	Ser	Ser	Ala	Glu	Asn	Ile	Leu	Tyr	Thr	Val	Gly
225					230					235					240
Leu	Trp	Glu	Ala	Pro	Arg	Gln	Gly	Gly	Arg	Gln	Ala	Gln	Ala	Ala	Gly
			245						250					255	
Asp	Pro	Gln	Gly	Ser	Glu	Glu	Lys	Leu	Ser	Cys	Phe	Pro	Pro	Arg	Val
			260					265					270		
Pro	Gly	Asp	Ser	Gly	Lys	Gly	Pro	Arg	Pro	Glu	Tyr	Asn	Ala	Glu	Pro
	275						280					285			
Lys	Leu	Ala	Ala	Pro	Gly	Arg	Ser	Asn	Phe	Gly	Pro	Val	Trp	Tyr	Val
	290					295					300				
Pro	Asp	Lys	Lys	Lys	Ala	Pro	Ser	Ser	Pro	Pro	Pro	Pro	Pro	Pro	Pro
305					310					315					320
Leu	Arg	Ser	Asp	Ser	Phe	Ala	Ala	Thr	Lys	Ser	His	Glu	Lys	Ala	Gln
			325						330					335	
Gly	Pro	Val	Phe												

Lys Asp Gly Ala Ser Ser Arg Leu Gln Ala Ser Leu Ser Ser Ser Asp
 405 410 415
 Val Arg Phe Pro Gln Ser Pro His Ser Gly Arg His Pro Pro Leu Tyr
 420 425 430
 Ser Asp His Ser Pro Leu Cys Ala Asp Ser Leu Gly Gln Glu Pro Gly
 435 440 445
 Ala Ala Ser Phe Gln Asn Asp Ser Pro Pro Gln Val Arg Gly Leu Ser
 450 455 460
 Ser Cys Asp Gln Lys Leu Gly Ser Gly Trp Gln Gly Pro Arg Pro Cys
 465 470 475 480
 Val Gln Gly Asp Leu Gln Ala Ala Gln Leu Trp Ala Gly Cys Trp Pro
 485 490 495
 Ser Asp Thr Ala Leu Gly Ala Leu Glu Ser Leu Pro Pro Pro Thr Val
 500 505 510
 Gly Gln Ser Pro Arg His His Leu Pro Gln Pro Glu Gly Pro Pro Asp
 515 520 525
 Ala Arg Glu Thr Gly Arg Cys Tyr Pro Leu Asp Lys Gly Ala Glu Gly
 530 535 540
 Cys Ser Ala Gly Ala Gln Glu Pro Pro Arg Ala Ser Arg Ala Glu Lys
 545 550 555 560
 Ala Ser Gln Arg Leu Ala Ala Ser Ile Thr Trp Ala Asp Gly Glu Ser
 565 570 575
 Ser Arg Ile Cys Pro Gln Glu Thr Pro Leu Leu His Ser Leu Thr Gln
 580 585 590
 Glu Gly Lys Arg Arg Pro Glu Ser Ser Pro Glu Asp Ser Ala Thr Arg
 595 600 605
 Pro Pro Pro Phe Asp Ala His Val Gly Lys Pro Thr Arg Arg Ser Asp
 610 615 620
 Arg Phe Ala Thr Thr Leu Arg Asn Glu Ile Gln Met His Arg Ala Lys
 625 630 635 640
 Leu Gln Lys Ser Arg Ser Thr Val Ala Leu Thr Ala Ala Gly Glu Ala
 645 650 655
 Glu Asp Gly Thr Gly Arg Trp Arg Ala Gly Leu Gly Gly Gly Thr Gln
 660 665 670
 Glu Gly Pro Leu Ala Gly Thr Tyr Lys Asp His Leu Lys Glu Ala Gln
 675 680 685
 Ala Arg Val Leu Arg Ala Thr Ser Phe Lys Arg Arg Asp Leu Asp Pro
 690 695 700
 Asn Pro Gly Asp Leu Tyr Pro Glu Ser Leu Glu His Arg Met Gly Asp
 705 710 715 720
 Pro Asp Thr Val Pro His Phe Trp Glu Ala Gly Leu Ala Gln Pro Pro
 725 730 735
 Ser Ser Thr Ser Gly Gly Pro His Pro Pro Arg Ile Gly Gly Arg Arg
 740 745 750
 Arg Phe Thr Ala Glu Gln Lys Leu Lys Ser Tyr Ser Glu Pro Glu Lys
 755 760 765
 Met Asn Glu Val Gly Leu Thr Arg Gly Tyr Ser Pro His Gln His Pro
 770 775 780
 Arg Thr Ser Glu Asp Thr Val Gly Thr Phe Ala Asp Arg Trp Lys Phe
 785 790 795 800
 Phe Glu Glu Thr Ser Lys Pro Val Pro Gln Arg Pro Ala Gln Lys Gln
 805 810 815
 Ala Leu His Gly Ile Pro Arg Asp Lys Pro Glu Arg Pro Arg Thr Ala
 820 825 830
 Gly Arg Thr Cys Glu Gly Thr Glu Pro Trp Ser Arg Thr Thr Ser Leu
 835 840 845
 Gly Asp Ser Leu Asn Ala His Ser Ala Ala Glu Lys Ala Gly Thr Ser
 850 855 860
 Asp Leu Pro Arg Arg Leu Gly Thr Phe Ala Glu Tyr Gln Ala Ser Trp
 865 870 875 880
 Lys Glu Gln Arg Lys Pro Leu Glu Ala Arg Ser Ser Gly Arg Cys His
 885 890 895
 Ser Ala Asp Asp Ile Leu Asp Val Ser Leu Asp Pro Gln Glu Arg Pro
 900 905 910

Gln His Val His Gly Arg Ser Arg Ser Ser Pro Ser Thr Asp His Tyr
 915 920 925
 Lys Gln Glu Ala Ser Val Glu Leu Arg Arg Gln Ala Gly Asp Pro Gly
 930 935 940
 Glu Pro Arg Glu Glu Leu Pro Ser Ala Val Arg Ala Glu Glu Gly Gln
 945 950 955 960
 Ser Thr Pro Arg Gln Ala Asp Ala Gln Cys Arg Glu Gly Ser Pro Gly
 965 970 975
 Ser Gln Gln His Pro Pro Ser Gln Lys Ala Pro Asn Pro Pro Thr Phe
 980 985 990
 Ser Glu Leu Ser His Cys Arg Gly Ala Pro Glu Leu Pro Arg Glu Gly
 995 1000 1005
 Arg Gly Arg Ala Gly Thr Leu Pro Arg Asp Tyr Arg Tyr Ser Glu Glu
 1010 1015 1020
 Ser Thr Pro Ala Asp Leu Gly Pro Arg Ala Gln Ser Pro Gly Ser Pro
 1025 1030 1035 1040
 Leu His Ala Arg Gly Gln Asp Ser Trp Pro Val Ser Ser Ala Leu Leu
 1045 1050 1055
 Ser Lys Arg Pro Ala Pro Gln Arg Pro Pro Pro Pro Lys Arg Glu Pro
 1060 1065 1070
 Arg Arg Tyr Arg Ala Thr Asp Gly Ala Pro Ala Asp Ala Pro Val Gly
 1075 1080 1085
 Val Leu Gly Arg Pro Phe Pro Thr Pro Ser Pro Ala Ser Leu Asp Val
 1090 1095 1100
 Tyr Val Ala Arg Leu Ser Leu Ser His Ser Pro Ser Val Phe Ser Ser
 1105 1110 1115 1120
 Ala Gln Pro Gln Asp Thr Pro Lys Ala Thr Val Cys Glu Arg Gly Ser
 1125 1130 1135
 Gln His Val Gly Gly Asp Ala Ser Arg Pro Leu Pro Glu Ala Leu Leu
 1140 1145 1150
 Pro Pro Lys Gln Gln His Leu Arg Leu Gln Thr Ala Thr Met Glu Thr
 1155 1160 1165
 Ser Arg Ser Pro Ser Pro Gln Phe Ala Pro Gln Lys Leu Thr Asp Lys
 1170 1175 1180
 Pro Pro Leu Leu Ile Gln Asp Glu Asp Ser Thr Arg Ile Glu Arg Val
 1185 1190 1195 1200
 Met Asp Asn Asn Thr Thr Val Lys Met Val Pro Ile Lys Ile Val His
 1205 1210 1215
 Ser Glu Ser Gln Pro Glu Lys Glu Ser Arg Gln Ser Leu Ala Cys Pro
 1220 1225 1230
 Ala Glu Pro Pro Ala Leu Pro His Gly Leu Glu Lys Asp Gln Ile Lys
 1235 1240 1245
 Thr Leu Ser Thr Ser Glu Gln Phe Tyr Ser Arg Phe Cys Leu Tyr Thr
 1250 1255 1260
 Arg Gln Gly Ala Glu Pro Glu Ala Pro His Arg Ala Gln Pro Ala Glu
 1265 1270 1275 1280
 Pro Gln Pro Leu Gly Thr Gln Val Pro Pro Glu Lys Asp Arg Cys Thr
 1285 1290 1295
 Ser Pro Pro Gly Leu Ser Tyr Met Lys Ala Lys Glu Lys Thr Val Glu
 1300 1305 1310
 Asp Leu Lys Ser Glu Glu Leu Ala Arg Glu Ile Val Gly Lys Asp Lys
 1315 1320 1325
 Ser Leu Ala Asp Ile Leu Asp Pro Ser Val Lys Ile Lys Thr Thr Met
 1330 1335 1340
 Asp Leu Met Glu Gly Ile Phe Pro Lys Asp Glu His Leu Leu Glu Glu
 1345 1350 1355 1360
 Ala Gln Gln Arg Arg Lys Leu Leu Pro Lys Ile Pro Ser Pro Arg Ser
 1365 1370 1375
 Thr Glu Glu Arg Lys Glu Glu Pro Ser Val Pro Ala Ala Val Ser Leu
 1380 1385 1390
 Ala Thr Asn Ser Thr Tyr Tyr Ser Thr Ser Ala Pro Lys Ala Glu Leu
 1395 1400 1405
 Leu Ile Lys Met Lys Asp Leu Gln Glu Gln Glu His Glu Glu Asp
 1410 1415 1420

Ser Gly Ser Asp Leu Asp His Asp Leu Ser Val Lys Lys Gln Glu Leu
 1425 1430 1435 1440
 Ile Glu Ser Ile Ser Arg Lys Leu Gln Val Leu Arg Glu Ala Arg Glu
 1445 1450 1455
 Ser Leu Leu Glu Asp Val Gln Ala Asn Thr Val Leu Gly Ala Glu Val
 1460 1465 1470
 Glu Ala Ile Val Lys Gly Val Cys Lys Pro Ser Glu Phe Asp Lys Phe
 1475 1480 1485
 Arg Met Phe Ile Gly Asp Leu Asp Lys Val Val Asn Leu Leu Leu Ser
 1490 1495 1500
 Leu Ser Gly Arg Leu Ala Arg Val Glu Asn Ala Leu Asn Asn Leu Asp
 1505 1510 1515 1520
 Asp Gly Ala Ser Pro Gly Asp Arg Gln Ser Leu Leu Glu Lys Gln Arg
 1525 1530 1535
 Val Leu Ile Gln Gln His Glu Asp Ala Lys Glu Leu Lys Glu Asn Leu
 1540 1545 1550
 Asp Arg Arg Glu Arg Ile Val Phe Asp Ile Leu Ala Asn Tyr Leu Ser
 1555 1560 1565
 Glu Glu Ser Leu Ala Asp Tyr Glu His Phe Val Lys Met Lys Ser Ala
 1570 1575 1580
 Leu Ile Ile Glu Gln Arg Glu Leu Glu Asp Lys Ile His Leu Gly Glu
 1585 1590 1595 1600
 Glu Gln Leu Lys Cys Leu Leu Asp Ser Leu Gln Pro Glu Arg Gly Lys
 1605 1610 1615 1616

<210> 1173

<211> 593

<212> PRT

<213> Homo sapiens

<400> 1173

Met Glu Thr Pro Pro Leu Pro Pro Ala Cys Thr Lys Gln Gly His Gln
 1 5 10 15
 Lys Pro Leu Asp Ser Lys Asp Asp Asn Thr Glu Lys His Cys Pro Val
 20 25 30
 Thr Val Asn Pro Trp His Met Lys Lys Ala Phe Lys Val Met Asn Glu
 35 40 45
 Leu Arg Ser Gln Asn Leu Leu Cys Asp Val Thr Ile Val Ala Glu Asp
 50 55 60
 Met Glu Ile Ser Ala His Arg Val Val Leu Ala Ala Cys Ser Pro Tyr
 65 70 75 80
 Phe His Ala Met Phe Thr Gly Glu Met Ser Glu Ser Arg Ala Lys Arg
 85 90 95
 Val Arg Ile Lys Glu Val Asp Gly Trp Thr Leu Arg Met Leu Ile Asp
 100 105 110
 Tyr Val Tyr Thr Ala Glu Ile Gln Val Thr Glu Glu Asn Val Gln Val
 115 120 125
 Leu Leu Pro Ala Ala Gly Leu Leu Gln Leu Gln Asp Val Lys Lys Thr
 130 135 140
 Cys Cys Glu Phe Leu Glu Ser Gln Leu His Pro Val Asn Cys Leu Gly
 145 150 155 160
 Ile Arg Ala Phe Ala Asp Met His Ala Cys Thr Asp Leu Leu Asn Lys
 165 170 175
 Ala Asn Thr Tyr Ala Glu Gln His Phe Ala Asp Val Val Leu Ser Glu
 180 185 190
 Glu Phe Leu Asn Leu Gly Ile Glu Gln Val Cys Ser Leu Ile Ser Ser
 195 200 205
 Asp Lys Leu Thr Ile Ser Ser Glu Glu Lys Val Phe Glu Ala Val Ile
 210 215 220

Ala Trp Val Asn His Asp Lys Asp Val Arg Gln Glu Phe Met Ala Arg
 225 230 235 240
 Leu Met Glu His Val Arg Leu Pro Leu Leu Pro Arg Glu Tyr Leu Val
 245 250 255
 Gln Arg Val Glu Glu Glu Ala Leu Val Lys Asn Ser Ser Ala Cys Lys
 260 265 270
 Asn Tyr Leu Ile Glu Ala Met Lys Tyr His Leu Leu Pro Thr Glu Gln
 275 280 285
 Arg Ile Leu Met Lys Ser Val Arg Thr Arg Leu Arg Thr Pro Met Asn
 290 295 300
 Leu Pro Lys Leu Met Val Val Val Gly Gly Gln Ala Pro Lys Ala Ile
 305 310 315 320
 Arg Ser Val Glu Cys Tyr Asp Phe Lys Glu Gln Arg Trp His Gln Val
 325 330 335
 Ala Glu Leu Pro Ser Arg Arg Cys Arg Ala Gly Met Val Tyr Met Ala
 340 345 350
 Gly Leu Val Phe Ala Val Gly Gly Phe Asn Gly Ser Leu Arg Val Arg
 355 360 365
 Thr Val Asp Ser Tyr Asp Pro Val Lys Asp Gln Trp Thr Ser Val Ala
 370 375 380
 Asn Met Arg Asp Arg Arg Ser Thr Leu Gly Ala Val Leu Asn Gly
 385 390 395 400
 Leu Leu Tyr Ala Val Gly Gly Phe Asp Gly Ser Thr Gly Leu Ser Ser
 405 410 415
 Val Glu Ala Tyr Asn Ile Lys Ser Asn Glu Trp Phe His Val Ala Pro
 420 425 430
 Met Asn Thr Arg Arg Ser Ser Val Gly Val Gly Val Gly Gly Leu
 435 440 445
 Leu Tyr Ala Val Gly Gly Tyr Asp Gly Ala Ser Arg Gln Tyr Leu Ser
 450 455 460
 Thr Val Glu Cys Tyr Asn Ala Thr Thr Asn Glu Trp Thr Tyr Ile Ala
 465 470 475 480
 Glu Met Ser Thr Arg Arg Ser Gly Ala Gly Val Gly Val Leu Asn Asn
 485 490 495
 Leu Leu Tyr Ala Val Gly Gly His Asp Gly Pro Leu Val Arg Lys Ser
 500 505 510
 Val Glu Val Tyr Asp Pro Thr Thr Asn Ala Trp Arg Gln Val Ala Asp
 515 520 525
 Met Asn Met Cys Arg Arg Asn Ala Gly Val Cys Ala Val Asn Gly Leu
 530 535 540
 Leu Tyr Val Val Gly Gly Asp Asp Gly Ser Cys Asn Leu Ala Ser Val
 545 550 555 560
 Glu Tyr Tyr Asn Pro Thr Thr Asp Lys Trp Thr Val Val Ser Ser Cys
 565 570 575
 Met Ser Thr Gly Arg Ser Tyr Ala Gly Val Thr Val Ile Asp Lys Pro
 580 585 590
 Leu
 593

<210> 1174
 <211> 285
 <212> PRT
 <213> Homo sapiens

<400> 1174
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu
 1 5 10 15
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala
 20 25 30
 Glu Asp Arg Ser Lys Gln Leu Glu Glu Asp Ile Ala Ala Lys Glu Lys
 35 40 45


```

Leu Leu Arg Val Ser Glu Asp Glu Arg Asp Lys Tyr Ser Glu Ala Leu
 50          55          60
Lys Asp Ala Glu Asp Ser Leu Leu Ala Ala Glu Glu Ala Ala Lys
 65          70          75          80
Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu
          85          90          95
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys
          100          105          110
Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys
          115          120          125
Val Ile Glu Ser Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln
          130          135          140
Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg
          145          150          155          160
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu
          165          170          175
Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu
          180          185          190
Leu Glu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu
          195          200          205
Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Arg Tyr Glu Glu Glu
          210          215          220
Ile Lys Val Leu Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu
          225          230          235          240
Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu
          245          250          255
Glu Glu Lys Val Ala His Ala Lys Glu Glu Asn Leu Ser Met His Gln
          260          265          270
Met Leu Asp Gln Thr Leu Leu Glu Leu Asn Asn Met *
          275          280          284

```

```

<210> 1175
<211> 207
<212> PRT
<213> Homo sapiens

```

```

<400> 1175
Met Glu Glu Ser Lys Leu Lys Asn Asp Asp Arg Lys Thr Pro Val Asn
 1          5          10          15
Trp Lys Asp Ser Arg Gly Thr Arg Val Ala Val Ser Ser Pro Met Ser
          20          25          30
Gln His Gln Ser Tyr Ile Gln Tyr Leu His Ala Tyr Pro Tyr Pro Gln
          35          40          45
Met Tyr Asp Pro Ser His Pro Ala Tyr Arg Ala Val Ser Pro Val Leu
          50          55          60
Met His Ser Tyr Pro Gly Ala Tyr Leu Ser Pro Gly Phe His Tyr Pro
          65          70          75          80
Val Tyr Gly Lys Met Ser Gly Arg Glu Glu Thr Glu Lys Val Asn Thr
          85          90          95
Ser Pro Ser Val Asn Thr Lys Thr Thr Thr Glu Ser Lys Ala Leu Asp
          100          105          110
Leu Leu Gln Gln His Ala Asn Gln Tyr Arg Ser Lys Ser Pro Ala Pro
          115          120          125
Val Glu Lys Ala Thr Ala Glu Arg Glu Arg Glu Ala Glu Arg Glu Arg
          130          135          140
Asp Arg His Ser Pro Phe Gly Gln Arg His Leu His Thr His His His
          145          150          155          160
Thr His Val Gly Met Gly Tyr Pro Leu Ile Pro Gly Gln Tyr Asp Pro
          165          170          175
Phe Gln Gly Leu Thr Ser Ala Ala Leu Val Ala Ser Gln Gln Val Ala
          180          185          190

```

Ala Gln Ala Ser Ala Ser Gly Met Phe Pro Gly Gln Arg Arg Glu
 195 200 205 207

<210> 1176
 <211> 211
 <212> PRT
 <213> Homo sapiens

<400> 1176
 Met Val Lys Gly Phe Arg Asn Trp Leu Lys Pro Ser Ser Leu Ser Thr
 1 5 10 15
 Leu Pro Leu Gln Tyr Gly Ile Leu Phe Pro Lys Leu Leu Ala Trp Leu
 20 25 30
 Val His Leu His Phe Gly His Phe Ser Ser Ala Val Ile Ser Val Thr
 35 40 45
 Ser Phe Tyr Leu Ser Met Asn Leu Asp Gly Ser Ala Gln Asp Pro Glu
 50 55 60
 Lys Arg Glu Tyr Ser Ser Val Cys Val Gly Arg Glu Asp Asp Ile Lys
 65 70 75 80
 Lys Ser Glu Arg Met Thr Ala Val Val His Asp Arg Glu Val Val Ile
 85 90 95
 Phe Tyr His Lys Gly Glu Tyr His Ala Met Asp Ile Arg Cys Tyr His
 100 105 110
 Ser Gly Gly Pro Leu His Leu Gly Asp Ile Glu Asp Phe Asp Gly Arg
 115 120 125
 Pro Cys Ile Val Cys Pro Trp His Lys Tyr Lys Ile Thr Leu Ala Thr
 130 135 140
 Gly Glu Gly Leu Tyr Gln Ser Ile Asn Pro Lys Asp Pro Ser Ala Lys
 145 150 155 160
 Pro Lys Trp Cys Ser Lys Gly Ile Lys Gln Arg Ile His Thr Val Thr
 165 170 175
 Val Asp Asn Gly Asn Ile Tyr Val Thr Leu Ser Asn Glu Pro Phe Lys
 180 185 190
 Cys Asp Ser Asp Phe Tyr Ala Thr Gly Asp Phe Lys Val Ile Lys Ser
 195 200 205
 Ser Ser *
 210

<210> 1177
 <211> 92
 <212> PRT
 <213> Homo sapiens

<400> 1177
 Met Ser Cys Gln Gln Asn Gln Gln Gln Cys Gln Pro Pro Pro Lys Cys
 1 5 10 15
 Pro Ser Pro Lys Cys Pro Pro Lys Ser Pro Val Gln Cys Leu Pro Pro
 20 25 30
 Ala Ser Ser Gly Cys Ala Pro Ser Ser Gly Gly Cys Gly Pro Ser Ser
 35 40 45
 Glu Gly Gly Cys Phe Leu Asn His His Arg Arg His His Arg Cys Arg
 50 55 60
 Arg Gln Arg Pro Asn Ser Cys Asp Arg Gly Ser Gly Gln Gln Gly Gly
 65 70 75 80
 Gly Ser Gly Cys Gly His Gly Ser Gly Gly Cys Cys
 85 90 92

<210> 1178
 <211> 405
 <212> PRT
 <213> Homo sapiens

<400> 1178
 Met Leu Gly Asp Pro Pro Ala Ser Pro Leu Thr Arg Asn Arg Thr Gly
 1 5 10 15
 Ala Ala Ala Ser Arg Leu Pro Thr Cys Leu Gln Gln Trp Pro Arg Gly
 20 25 30
 Ala Leu Arg Lys Arg Leu Tyr Lys Gly Leu Ser Pro Ala Leu Pro Ser
 35 40 45
 Arg Glu Glu Asn Arg Arg Arg Ala Gln Glu Glu Thr Val Pro Ala Gly
 50 55 60
 Gly Arg Ser Cys Arg Ser Gly Gly Leu Leu Gly Ala Gly Leu Gly Gly
 65 70 75 80
 Asp Arg Trp Arg Gly Gly Ala Trp Gly Ser Glu Gly Trp Ala Leu Glu
 85 90 95
 Ile Arg Gly Ser Thr Leu Leu Arg Cys Leu Asp Ser Gly Phe Arg Pro
 100 105 110
 Gly Ala Ser Arg Gly Leu Val Gly Ser Trp Ala Ala Met Glu Ser Thr
 115 120 125
 Leu Gly Ala Gly Ile Val Ile Ala Glu Ala Leu Gln Asn Gln Leu Ala
 130 135 140
 Trp Leu Glu Asn Val Trp Leu Trp Ile Thr Phe Leu Gly Asp Pro Lys
 145 150 155 160
 Ile Leu Phe Leu Phe Tyr Phe Pro Ala Ala Tyr Tyr Ala Ser Arg Arg
 165 170 175
 Val Gly Ile Ala Val Leu Trp Ile Ser Leu Ile Thr Glu Trp Leu Asn
 180 185 190
 Leu Ile Phe Lys Cys Arg Trp Val Arg Val Met Pro Ser Leu Ala Tyr
 195 200 205
 Cys Thr Phe Leu Leu Ala Val Gly Leu Ser Arg Ile Phe Ile Leu Ala
 210 215 220
 His Phe Pro His Gln Val Leu Ala Gly Leu Ile Thr Gly Ala Val Leu
 225 230 235 240
 Gly Trp Leu Met Thr Pro Arg Val Pro Met Glu Arg Glu Leu Ser Phe
 245 250 255
 Tyr Gly Leu Thr Ala Leu Ala Leu Met Leu Gly Thr Ser Leu Ile Tyr
 260 265 270
 Trp Thr Leu Phe Thr Leu Gly Leu Asp Leu Ser Trp Ser Ile Ser Leu
 275 280 285
 Ala Phe Lys Trp Cys Glu Arg Pro Glu Trp Ile His Val Asp Ser Arg
 290 295 300
 Pro Phe Ala Ser Leu Ser Arg Asp Ser Gly Ala Ala Leu Gly Leu Gly
 305 310 315 320
 Ile Ala Leu His Ser Pro Cys Tyr Ala Gln Val Arg Arg Ala Gln Leu
 325 330 335
 Gly Asn Gly Gln Lys Ile Ala Cys Leu Val Leu Ala Met Gly Leu Leu
 340 345 350
 Gly Pro Leu Asp Trp Leu Gly His Pro Pro Gln Ile Ser Leu Phe Tyr
 355 360 365
 Ile Phe Asn Phe Leu Lys Tyr Thr Leu Trp Pro Cys Leu Val Leu Ala
 370 375 380
 Leu Val Pro Trp Ala Val His Met Phe Ser Ala Gln Glu Ala Pro Pro
 385 390 395 400
 Ile His Ser Ser *

<210> 1179

<211> 266
 <212> PRT
 <213> Homo sapiens

<400> 1179

```

Met Met Ala Leu Gly Ala Ala Gly Ala Thr Arg Val Phe Val Ala Met
 1          5          10          15
Val Ala Ala Ala Leu Gly Gly His Pro Leu Leu Gly Val Ser Ala Thr
          20          25          30
Leu Asn Ser Val Leu Asn Ser Asn Ala Ile Lys Asn Leu Pro Pro Pro
          35          40          45
Leu Gly Gly Ala Ala Gly His Pro Gly Ser Ala Val Ser Ala Ala Pro
          50          55          60
Gly Ile Leu Tyr Pro Gly Gly Asn Lys Tyr Gln Thr Ile Asp Asn Tyr
          65          70          75          80
Gln Pro Tyr Pro Cys Ala Glu Asp Glu Glu Cys Gly Thr Asp Glu Tyr
          85          90          95
Cys Ala Ser Pro Thr Arg Gly Gly Asp Ala Gly Val Gln Ile Cys Leu
          100          105          110
Ala Cys Arg Lys Arg Arg Lys Arg Cys Met Arg His Ala Met Cys Cys
          115          120          125
Pro Gly Asn Tyr Cys Lys Asn Gly Ile Cys Val Ser Ser Asp Gln Asn
          130          135          140
His Phe Arg Gly Glu Ile Glu Glu Thr Ile Thr Glu Ser Phe Gly Asn
          145          150          155          160
Asp His Ser Thr Leu Asp Gly Tyr Ser Arg Thr Thr Leu Ser Ser
          165          170          175
Lys Met Tyr His Thr Lys Gly Gln Glu Gly Ser Val Cys Leu Arg Ser
          180          185          190
Ser Asp Cys Ala Ser Gly Leu Cys Cys Ala Arg His Phe Trp Ser Lys
          195          200          205
Ile Cys Lys Pro Val Leu Lys Glu Gly Gln Val Cys Thr Lys His Arg
          210          215          220
Arg Lys Gly Ser His Gly Leu Glu Ile Phe Gln Arg Cys Tyr Cys Gly
          225          230          235          240
Glu Gly Leu Ser Cys Arg Ile Gln Lys Asp His His Gln Ala Ser Asn
          245          250          255
Ser Ser Arg Leu His Thr Cys Gln Arg His
          260          265 266

```

<210> 1180
 <211> 520
 <212> PRT
 <213> Homo sapiens

<400> 1180

```

Met Ser Thr Leu Tyr Asp Ile Arg Ala His Lys Ala Gln Leu Leu Arg
 1          5          10          15
Phe Phe Ala Ser Ser Asp Ser Asn Lys Ala Leu Glu Gln Arg Arg Thr
          20          25          30
Leu His Thr Pro Lys Leu Glu His Leu Asp Arg Val Leu Tyr Glu Trp
          35          40          45
Phe Leu Gly Lys Arg Ser Glu Gly Val Pro Val Ser Gly Pro Met Leu
          50          55          60
Ile Glu Lys Ala Lys Asp Phe Tyr Glu Gln Met Gln Leu Thr Glu Pro
          65          70          75          80
Cys Val Phe Ser Gly Gly Trp Leu Trp Arg Phe Lys Ala Arg His Gly
          85          90          95
Ile Lys Lys Leu Asp Ala Ser Ser Glu Lys Gln Ser Ala Asp His Gln
          100          105          110

```

Ala Ala Glu Gln Phe Cys Ala Phe Phe Arg Ser Leu Ala Ala Glu His
 115 120 125
 Gly Leu Ser Ala Glu Gln Val Tyr Asn Ala Asp Glu Thr Gly Leu Phe
 130 135 140
 Trp Arg Cys Leu Pro Asn Pro Thr Pro Glu Gly Gly Ala Val Pro Gly
 145 150 155 160
 Pro Lys Gln Gly Lys Asp Arg Leu Thr Val Leu Met Cys Ala Asn Ala
 165 170 175
 Thr Gly Ser His Arg Leu Lys Pro Leu Ala Ile Gly Lys Cys Ser Gly
 180 185 190
 Pro Arg Ala Phe Lys Gly Ile Gln His Leu Pro Val Ala Tyr Lys Ala
 195 200 205
 Gln Gly Asn Ala Trp Val Asp Lys Glu Ile Phe Ser Asp Trp Phe His
 210 215 220
 His Ile Phe Val Pro Ser Val Arg Glu His Phe Arg Thr Ile Gly Leu
 225 230 235 240
 Pro Glu Asp Ser Lys Ala Val Leu Leu Leu Asp Ser Ser Arg Ala His
 245 250 255
 Pro Gln Glu Ala Glu Leu Val Ser Ser Asn Val Phe Thr Ile Phe Leu
 260 265 270
 Pro Ala Ser Val Ala Ser Leu Val Gln Pro Met Glu Gln Gly Ile Arg
 275 280 285
 Arg Asp Phe Met Arg Asn Phe Ile Asn Pro Pro Val Pro Leu Gln Gly
 290 295 300
 Pro His Ala Arg Tyr Asn Met Asn Asp Ala Ile Phe Ser Val Ala Cys
 305 310 315 320
 Ala Trp Asn Ala Val Pro Ser His Val Phe Arg Arg Ala Trp Arg Lys
 325 330 335
 Leu Trp Pro Ser Val Ala Phe Ala Glu Gly Ser Ser Ser Glu Glu Glu
 340 345 350
 Leu Glu Ala Glu Cys Phe Pro Val Lys Pro His Asn Lys Ser Phe Ala
 355 360 365
 His Ile Leu Glu Leu Val Lys Glu Gly Ser Ser Cys Pro Gly Gln Leu
 370 375 380
 Arg Gln Arg Gln Ala Ala Ser Trp Gly Val Ala Gly Arg Glu Ala Glu
 385 390 395 400
 Gly Gly Arg Pro Pro Ala Ala Thr Ser Pro Ala Glu Val Val Trp Ser
 405 410 415
 Ser Glu Lys Thr Pro Lys Ala Asp Gln Asp Gly Arg Gly Asp Pro Gly
 420 425 430
 Glu Gly Glu Glu Val Ala Trp Glu Gln Ala Ala Val Ala Phe Asp Ala
 435 440 445
 Val Leu Arg Phe Ala Glu Arg Gln Pro Cys Phe Ser Ala Gln Glu Val
 450 455 460
 Gly Gln Leu Arg Ala Leu Arg Ala Val Phe Arg Ser Gln Gln Gln Val
 465 470 475 480
 Arg Arg Arg Arg Gly Ala Leu Gly Ala Val Val Lys Val Glu Ala Leu
 485 490 495
 Gln Glu Gly Pro Gly Gly Cys Gly Ala Thr Ala Gln Ser Pro Leu Pro
 500 505 510
 Cys Ser Ser Thr Ala Gly Asp Asn
 515 520

<210> 1181
 <211> 1328
 <212> PRT
 <213> Homo sapiens

<400> 1181
 Met Ile Ser Thr Ala Pro Leu Tyr Ser Gly Val His Asn Trp Thr Ser
 1 5 10 15

Ser	Asp	Arg	Ile	Arg	Met	Cys	Gly	Ile	Asn	Glu	Glu	Arg	Arg	Ala	Pro	20	25	30
Leu	Ser	Asp	Glu	Glu	Ser	Thr	Thr	Gly	Asp	Cys	Gln	His	Phe	Gly	Ser	35	40	45
Gln	Glu	Phe	Cys	Val	Ser	Ser	Ser	Phe	Ser	Lys	Val	Glu	Leu	Thr	Ala	50	55	60
Val	Gly	Ser	Gly	Ser	Asn	Ala	Arg	Gly	Ala	Asp	Pro	Asp	Gly	Ser	Ala	65	70	75
Thr	Glu	Lys	Leu	Gly	His	Lys	Ser	Glu	Asp	Lys	Pro	Asp	Asp	Pro	Gln	85	90	95
Pro	Lys	Met	Asp	Tyr	Ala	Gly	Asn	Val	Ala	Glu	Ala	Glu	Gly	Leu	Leu	100	105	110
Val	Pro	Leu	Ser	Ser	Pro	Gly	Asp	Gly	Leu	Lys	Leu	Pro	Ala	Ser	Asp	115	120	125
Ser	Ala	Glu	Ala	Ser	Asn	Ser	Arg	Ala	Asp	Cys	Ser	Trp	Thr	Pro	Leu	130	135	140
Asn	Thr	Gln	Met	Ser	Lys	Gln	Val	Asp	Cys	Ser	Pro	Ala	Gly	Val	Lys	145	150	155
Ala	Leu	Asp	Ser	Arg	Gln	Gly	Val	Gly	Glu	Lys	Asn	Thr	Phe	Ile	Leu	165	170	175
Ala	Thr	Leu	Gly	Thr	Gly	Val	Pro	Val	Glu	Gly	Thr	Leu	Pro	Leu	Val	180	185	190
Thr	Thr	Asn	Phe	Ser	Pro	Leu	Pro	Ala	Pro	Ile	Cys	Pro	Pro	Ala	Pro	195	200	205
Ser	Ser	Ala	Ser	Val	Pro	His	Ser	Val	Pro	Asp	Ala	Phe	Gln	Ala	Pro	210	215	220
Val	Pro	Pro	Ser	Ala	Pro	Thr	Leu	Val	Leu	Ala	Pro	Val	Pro	Thr	Pro	225	230	235
Val	Leu	Ala	Pro	Met	Pro	Ala	Ser	Thr	Pro	Pro	Ala	Ala	Pro	Ala	Pro	245	250	255
Pro	Ser	Val	Pro	Met	Pro	Thr	Pro	Thr	Pro	Ser	Ser	Gly	Pro	Pro	Ser	260	265	270
Thr	Pro	Thr	Leu	Ile	Pro	Ala	Phe	Ala	Pro	Thr	Pro	Val	Pro	Ala	Pro	275	280	285
Thr	Pro	Ala	Pro	Ile	Phe	Thr	Pro	Ala	Pro	Thr	Pro	Met	Pro	Ala	Ala	290	295	300
Thr	Pro	Ala	Ala	Ile	Pro	Thr	Ser	Ala	Pro	Ile	Pro	Ala	Ser	Phe	Ser	305	310	315
Leu	Ser	Arg	Val	Cys	Phe	Pro	Ala	Ala	Gln	Ala	Pro	Ala	Met	Gln	Lys	325	330	335
Val	Pro	Leu	Ser	Phe	Gln	Pro	Gly	Thr	Val	Leu	Thr	Pro	Ser	Gln	Pro	340	345	350
Leu	Val	Tyr	Ile	Pro	Pro	Pro	Ser	Cys	Gly	Gln	Pro	Leu	Ser	Val	Ala	355	360	365
Thr	Leu	Pro	Thr	Thr	Leu	Gly	Val	Ser	Ser	Thr	Leu	Thr	Leu	Pro	Val	370	375	380
Leu	Pro	Ser	Tyr	Leu	Gln	Asp	Arg	Cys	Leu	Pro	Gly	Val	Leu	Ala	Ser	385	390	395
Pro	Glu	Leu	Arg	Ser	Tyr	Pro	Tyr	Ala	Phe	Ser	Val	Ala	Arg	Pro	Leu	405	410	415
Thr	Ser	Asp	Ser	Lys	Leu	Val	Ser	Leu	Glu	Val	Asn	Arg	Leu	Pro	Cys	420	425	430
Thr	Ser	Pro	Ser	Gly	Ser	Thr	Thr	Thr	Gln	Pro	Ala	Pro	Asp	Gly	Val	435	440	445
Pro	Gly	Pro	Leu	Ala	Asp	Thr	Ser	Leu	Val	Thr	Ala	Ser	Ala	Lys	Val	450	455	460
Leu	Pro	Thr	Pro	Gln	Pro	Leu	Leu	Pro	Ala	Pro	Ser	Gly	Ser	Ser	Ala	465	470	475
Pro	Pro	His	Pro	Ala	Lys	Met	Pro	Ser	Gly	Thr	Glu	Gln	Gln	Thr	Glu	485	490	495
Gly	Thr	Ser	Val	Thr	Phe	Ser	Pro	Leu	Lys	Ser	Pro	Pro	Gln	Leu	Glu	500	505	510
Arg	Glu	Met	Ala	Ser	Pro	Pro	Glu	Cys	Ser	Glu	Met	Pro	Leu	Asp	Leu	515	520	525

Ser	Ser	Lys	Ser	Asn	Arg	Gln	Lys	Leu	Pro	Leu	Pro	Asn	Gln	Arg	Lys
530						535					540				
Thr	Pro	Pro	Met	Pro	Val	Leu	Thr	Pro	Val	His	Thr	Ser	Ser	Lys	Ala
545					550					555					560
Leu	Leu	Ser	Thr	Val	Leu	Ser	Arg	Ser	Gln	Arg	Thr	Thr	Gln	Ala	Ala
				565					570					575	
Gly	Gly	Asn	Val	Thr	Ser	Cys	Leu	Gly	Ser	Thr	Ser	Ser	Pro	Phe	Val
			580					585					590		
Ile	Phe	Pro	Glu	Ile	Val	Arg	Asn	Gly	Asp	Pro	Ser	Thr	Trp	Val	Lys
		595					600					605			
Asn	Ser	Thr	Ala	Leu	Ile	Ser	Thr	Ile	Pro	Gly	Thr	Tyr	Val	Gly	Val
		610					615					620			
Ala	Asn	Pro	Val	Pro	Ala	Ser	Leu	Leu	Leu	Asn	Lys	Asp	Pro	Asn	Leu
625					630					635					640
Gly	Leu	Asn	Arg	Asp	Pro	Arg	His	Leu	Pro	Lys	Gln	Glu	Pro	Ile	Ser
				645					650					655	
Ile	Ile	Asp	Gln	Gly	Glu	Pro	Lys	Gly	Thr	Gly	Ala	Thr	Cys	Gly	Lys
			660					665					670		
Lys	Gly	Ser	Gln	Ala	Gly	Ala	Glu	Gly	Gln	Pro	Ser	Thr	Val	Lys	Arg
		675					680					685			
Tyr	Thr	Pro	Ala	Arg	Ile	Ala	Pro	Gly	Leu	Pro	Gly	Cys	Gln	Thr	Lys
		690					695					700			
Glu	Leu	Ser	Leu	Trp	Lys	Pro	Thr	Gly	Pro	Ala	Asn	Ile	Tyr	Pro	Arg
705					710					715					720
Cys	Ser	Val	Asn	Gly	Lys	Pro	Thr	Ser	Thr	Gln	Val	Leu	Pro	Val	Gly
				725					730					735	
Trp	Ser	Pro	Tyr	His	Gln	Ala	Ser	Leu	Leu	Ser	Ile	Gly	Ile	Ser	Ser
			740					745					750		
Ala	Gly	Gln	Leu	Thr	Pro	Ser	Gln	Gly	Ala	Pro	Ile	Arg	Pro	Thr	Ser
			755				760					765			
Val	Val	Ser	Glu	Phe	Ser	Gly	Val	Pro	Ser	Leu	Ser	Ser	Ser	Glu	Ala
			770				775					780			
Val	His	Gly	Leu	Pro	Glu	Gly	Gln	Pro	Arg	Pro	Gly	Gly	Ser	Phe	Val
785					790					795					800
Pro	Glu	Gln	Asp	Pro	Val	Thr	Lys	Asn	Lys	Thr	Cys	Arg	Ile	Ala	Ala
				805					810					815	
Lys	Pro	Tyr	Glu	Glu	Gln	Val	Asn	Pro	Val	Leu	Leu	Thr	Leu	Ser	Pro
			820					825					830		
Gln	Thr	Gly	Thr	Leu	Ala	Leu	Ser	Val	Gln	Pro	Ser	Gly	Gly	Asp	Ile
		835					840					845			
Arg	Met	Asn	Gln	Gly	Pro	Glu	Glu	Ser	Glu	Ser	His	Leu	Cys	Ser	Asp
		850					855					860			
Ser	Thr	Pro	Lys	Met	Glu	Gly	Pro	Gln	Gly	Ala	Cys	Gly	Leu	Lys	Leu
865					870					875					880
Ala	Gly	Asp	Thr	Lys	Pro	Lys	Asn	Gln	Val	Leu	Ala	Thr	Tyr	Met	Ser
				885					890					895	
His	Glu	Leu	Val	Leu	Ala	Thr	Pro	Gln	Asn	Leu	Pro	Lys	Met	Pro	Glu
			900					905					910		
Leu	Pro	Leu	Leu	Pro	His	Asp	Ser	His	Pro	Lys	Glu	Leu	Ile	Leu	Asp
		915					920					925			
Val	Val	Pro	Ser	Ser	Arg	Arg	Gly	Ser	Ser	Thr	Glu	Arg	Pro	Gln	Leu
			930				935					940			
Gly	Ser	Gln	Val	Asp	Leu	Gly	Arg	Val	Lys	Met	Glu	Lys	Val	Asp	Gly
945					950					955					960
Asp	Val	Val	Phe	Asn	Leu	Ala	Thr	Cys	Phe	Arg	Ala	Asp	Gly	Leu	Pro
				965					970					975	
Val	Ala	Pro	Gln	Arg	Gly	Gln	Ala	Glu	Val	Arg	Ala	Lys	Ala	Gly	Gln
			980					985					990		
Ala	Arg	Val	Lys	Gln	Glu	Ser	Val	Gly	Val	Phe	Ala	Cys	Lys	Asn	Lys
		995					1000					1005			
Trp	Gln	Pro	Asp	Asp	Val	Thr	Glu	Ser	Leu	Pro	Pro	Lys	Lys	Met	Lys
		1010					1015					1020			
Cys	Gly	Lys	Glu	Lys	Asp	Ser	Glu	Glu	Gln	Gln	Leu	Gln	Pro	Gln	Ala
1025					1030					1035					1040

```
<210> 1182
<211> 990
<212> PRT
<213> Homo sapiens
```

2941

Ile	Glu	Arg	Ile	Gln	Gly	Leu	Asp	Phe	Asp	Thr	Lys	Ala	Ala	Val	Ala	130	135	140
Ala	His	Ile	Gln	Glu	Val	Thr	His	Asn	Gln	Glu	Asn	Val	Phe	Asp	Leu	145	150	155
Gln	Trp	Met	Glu	Val	Thr	Asp	Met	Ser	Gln	Glu	Asp	Ile	Glu	Pro	Leu	165	170	175
Leu	Lys	Asn	Met	Ala	Leu	His	Leu	Lys	Arg	Leu	Ile	Asp	Glu	Arg	Asp	180	185	190
Glu	His	Ser	Glu	Thr	Ile	Ile	Glu	Leu	Ser	Glu	Glu	Arg	Asp	Gly	Leu	195	200	205
His	Phe	Leu	Pro	His	Ala	Ser	Ser	Ser	Ala	Gln	Ser	Pro	Cys	Gly	Ser	210	215	220
Pro	Gly	Met	Lys	Arg	Thr	Glu	Ser	Arg	Gln	His	Leu	Ser	Val	Glu	Leu	225	230	235
Ala	Asp	Ala	Lys	Ala	Lys	Ile	Arg	Arg	Leu	Arg	Gln	Glu	Leu	Glu	Glu	245	250	255
Lys	Thr	Glu	Gln	Leu	Leu	Asp	Cys	Lys	Gln	Glu	Leu	Glu	Gln	Met	Glu	260	265	270
Ile	Glu	Leu	Lys	Arg	Leu	Gln	Gln	Glu	Asn	Met	Asn	Leu	Leu	Ser	Asp	275	280	285
Ala	Arg	Ser	Ala	Arg	Met	Tyr	Arg	Asp	Glu	Leu	Asp	Ala	Leu	Arg	Glu	290	295	300
Lys	Ala	Val	Arg	Val	Asp	Lys	Leu	Glu	Ser	Glu	Val	Ser	Arg	Tyr	Lys	305	310	315
Glu	Arg	Leu	His	Asp	Ile	Glu	Phe	Tyr	Lys	Ala	Arg	Val	Glu	Glu	Leu	325	330	335
Lys	Glu	Asp	Asn	Gln	Val	Leu	Leu	Glu	Thr	Lys	Thr	Met	Leu	Glu	Asp	340	345	350
Gln	Leu	Glu	Gly	Thr	Arg	Ala	Arg	Ser	Asp	Lys	Leu	His	Glu	Leu	Glu	355	360	365
Lys	Glu	Asn	Leu	Gln	Leu	Lys	Ala	Lys	Leu	His	Asp	Met	Glu	Met	Glu	370	375	380
Arg	Asp	Met	Asp	Arg	Lys	Lys	Ile	Glu	Glu	Leu	Met	Glu	Glu	Asn	Met	385	390	395
Thr	Leu	Glu	Met	Ala	Gln	Lys	Gln	Ser	Met	Asp	Glu	Ser	Leu	His	Leu	405	410	415
Gly	Trp	Glu	Leu	Glu	Gln	Ile	Ser	Arg	Thr	Ser	Glu	Leu	Ser	Glu	Ala	420	425	430
Pro	Gln	Lys	Ser	Leu	Gly	His	Glu	Val	Asn	Glu	Leu	Thr	Ser	Ser	Arg	435	440	445
Leu	Leu	Lys	Leu	Glu	Met	Glu	Asn	Gln	Ser	Leu	Thr	Lys	Thr	Val	Glu	450	455	460
Glu	Leu	Arg	Thr	Thr	Val	Asp	Ser	Val	Glu	Gly	Asn	Ala	Ser	Lys	Ile	465	470	475
Leu	Lys	Met	Glu	Lys	Glu	Asn	Gln	Arg	Leu	Ser	Lys	Lys	Val	Glu	Ile	485	490	495
Leu	Glu	Asn	Glu	Ile	Val	Gln	Glu	Lys	Gln	Ser	Leu	Gln	Asn	Cys	Gln	500	505	510
Asn	Leu	Ser	Lys	Asp	Leu	Met	Lys	Glu	Lys	Ala	Gln	Leu	Glu	Lys	Thr	515	520	525
Ile	Glu	Thr	Leu	Arg	Glu	Asn	Ser	Glu	Arg	Gln	Ile	Lys	Ile	Leu	Glu	530	535	540
Gln	Glu	Asn	Glu	His	Leu	Asn	Gln	Thr	Val	Ser	Ser	Leu	Arg	Gln	Arg	545	550	555
Ser	Gln	Ile	Ser	Ala	Glu	Ala	Arg	Val	Lys	Asp	Ile	Glu	Lys	Glu	Asn	565	570	575
Lys	Ile	Leu	His	Glu	Ser	Ile	Lys	Glu	Thr	Ser	Ser	Lys	Leu	Ser	Lys	580	585	590
Ile	Glu	Phe	Glu	Lys	Arg	Gln	Ile	Lys	Lys	Glu	Leu	Glu	His	Tyr	Lys	595	600	605
Glu	Lys	Gly	Glu	Arg	Ala	Glu	Glu	Leu	Glu	Asn	Glu	Leu	His	His	Leu	610	615	620
Glu	Lys	Glu	Asn	Glu	Leu	Gln	Lys	Lys	Ile	Thr	Asn	Leu	Lys	Ile		625	630	635

Thr Cys Glu Lys Ile Glu Ala Leu Glu Gln Glu Asn Ser Glu Leu Glu
 645 650 655
 Arg Glu Asn Arg Lys Leu Lys Lys Thr Leu Asp Ser Phe Lys Asn Leu
 660 665 670
 Thr Phe Gln Leu Glu Ser Leu Glu Lys Glu Asn Ser Gln Leu Asp Glu
 675 680 685
 Glu Asn Leu Glu Leu Arg Arg Asn Val Glu Ser Leu Lys Cys Ala Ser
 690 695 700
 Met Lys Met Ala Gln Leu Gln Leu Glu Asn Lys Glu Leu Glu Ser Glu
 705 710 715 720
 Lys Glu Gln Leu Lys Lys Gly Leu Glu Leu Leu Lys Ala Ser Phe Lys
 725 730 735
 Lys Thr Glu Arg Leu Glu Val Ser Tyr Gln Gly Leu Asp Ile Glu Asn
 740 745 750
 Gln Arg Leu Gln Lys Thr Leu Glu Asn Ser Asn Lys Lys Ile Gln Gln
 755 760 765
 Leu Glu Ser Glu Leu Gln Asp Leu Glu Met Glu Asn Gln Thr Leu Gln
 770 775 780
 Lys Asn Leu Glu Glu Leu Lys Ile Ser Ser Lys Arg Leu Glu Gln Leu
 785 790 795 800
 Glu Lys Glu Asn Lys Ser Leu Glu Gln Glu Thr Ser Gln Leu Glu Lys
 805 810 815
 Asp Lys Lys Gln Leu Glu Lys Glu Asn Lys Arg Leu Arg Gln Gln Ala
 820 825 830
 Glu Ile Lys Asp Thr Thr Leu Glu Glu Asn Asn Val Lys Ile Gly Asn
 835 840 845
 Leu Glu Lys Glu Asn Lys Thr Leu Ser Lys Glu Ile Gly Ile Tyr Lys
 850 855 860
 Glu Ser Cys Val Arg Leu Lys Glu Leu Glu Lys Glu Asn Lys Glu Leu
 865 870 875 880
 Val Lys Arg Ala Thr Ile Asp Ile Lys Thr Leu Val Thr Leu Arg Glu
 885 890 895
 Asp Leu Val Ser Glu Lys Leu Lys Thr Gln Gln Met Asn Asn Asp Leu
 900 905 910
 Glu Lys Leu Thr His Glu Leu Glu Lys Ile Gly Leu Asn Lys Glu Arg
 915 920 925
 Leu Leu His Asp Glu Gln Ser Thr Asp Asp Ser Arg Tyr Lys Leu Leu
 930 935 940
 Glu Ser Lys Leu Glu Ser Thr Leu Lys Lys Ser Leu Glu Ile Lys Glu
 945 950 955 960
 Glu Lys Ile Ala Ala Leu Glu Ala Arg Leu Glu Glu Ser Thr Asn Tyr
 965 970 975
 Asn Gln Gln Leu Arg Gln Glu Leu Lys Thr Val Lys Lys Lys
 980 985 990

<210> 1183

<211> 819

<212> PRT

<213> Homo sapiens

<400> 1183

Met Asp Pro Gly Thr Ser Arg Gly Pro Asp Val Gly Val Gly Glu Ser
 1 5 10 15
 Gln Ala Glu Glu Pro Arg Ser Phe Glu Val Thr Arg Arg Glu Gly Leu
 20 25 30
 Ser Ser His Asn Glu Leu Leu Ala Ser Cys Gly Lys Lys Phe Cys Ser
 35 40 45
 Arg Gly Ser Arg Cys Val Leu Ser Arg Lys Thr Gly Glu Pro Glu Cys
 50 55 60
 Gln Cys Leu Glu Ala Cys Arg Pro Ser Tyr Val Pro Val Cys Gly Ser
 65 70 75 80

Asp	Gly	Arg	Phe	Tyr	Glu	Asn	His	Cys	Lys	Leu	His	Arg	Ala	Ala	Cys	85	90	95
Leu	Leu	Gly	Lys	Arg	Ile	Thr	Val	Ile	His	Ser	Lys	Asp	Cys	Phe	Leu	100	105	110
Lys	Gly	Asp	Thr	Cys	Thr	Met	Ala	Gly	Tyr	Ala	Arg	Leu	Lys	Asn	Val	115	120	125
Leu	Leu	Ala	Leu	Gln	Thr	Arg	Leu	Gln	Pro	Leu	Gln	Glu	Gly	Asp	Ser	130	135	140
Arg	Gln	Asp	Pro	Ala	Ser	Gln	Lys	Arg	Leu	Leu	Val	Glu	Ser	Leu	Phe	145	150	155
Arg	Asp	Leu	Asp	Ala	Asp	Gly	Asn	Gly	His	Leu	Ser	Ser	Ser	Glu	Leu	165	170	175
Ala	Gln	His	Val	Leu	Lys	Lys	Gln	Asp	Leu	Asp	Glu	Asp	Leu	Leu	Gly	180	185	190
Cys	Ser	Pro	Gly	Asp	Leu	Leu	Arg	Phe	Asp	Asp	Tyr	Asn	Ser	Asp	Ser	195	200	205
Ser	Leu	Thr	Leu	Arg	Glu	Phe	Tyr	Met	Ala	Phe	Gln	Val	Val	Gln	Leu	210	215	220
Ser	Leu	Ala	Pro	Glu	Asp	Arg	Val	Ser	Val	Thr	Thr	Val	Thr	Val	Gly	225	230	235
Leu	Ser	Thr	Val	Leu	Thr	Cys	Ala	Val	His	Gly	Asp	Leu	Arg	Pro	Pro	245	250	255
Ile	Ile	Trp	Lys	Arg	Asn	Gly	Leu	Thr	Leu	Asn	Phe	Leu	Asp	Leu	Glu	260	265	270
Asp	Ile	Asn	Asp	Phe	Gly	Glu	Asp	Asp	Ser	Leu	Tyr	Ile	Thr	Lys	Val	275	280	285
Thr	Thr	Ile	His	Met	Gly	Asn	Tyr	Thr	Cys	His	Ala	Ser	Gly	His	Glu	290	295	300
Gln	Leu	Phe	Gln	Thr	His	Val	Leu	Gln	Val	Asn	Val	Pro	Pro	Val	Ile	305	310	315
Arg	Val	Tyr	Pro	Glu	Ser	Gln	Ala	Gln	Glu	Pro	Gly	Val	Ala	Ala	Ser	325	330	335
Leu	Arg	Cys	His	Ala	Glu	Gly	Ile	Pro	Met	Pro	Arg	Ile	Thr	Trp	Leu	340	345	350
Lys	Asn	Gly	Val	Asp	Val	Ser	Thr	Gln	Met	Ser	Lys	Gln	Leu	Ser	Leu	355	360	365
Leu	Ala	Asn	Gly	Ser	Glu	Leu	His	Ile	Ser	Ser	Val	Arg	Tyr	Glu	Asp	370	375	380
Thr	Gly	Ala	Tyr	Thr	Cys	Ile	Ala	Lys	Asn	Glu	Val	Gly	Val	Asp	Glu	385	390	395
Asp	Ile	Ser	Ser	Leu	Phe	Ile	Glu	Asp	Ser	Ala	Arg	Lys	Thr	Leu	Ala	405	410	415
Asn	Ile	Leu	Trp	Arg	Glu	Glu	Gly	Leu	Ser	Val	Gly	Asn	Met	Phe	Tyr	420	425	430
Val	Phe	Ser	Asp	Asp	Gly	Ile	Ile	Val	Ile	His	Pro	Val	Asp	Cys	Glu	435	440	445
Ile	Gln	Arg	His	Leu	Lys	Pro	Thr	Glu	Lys	Ile	Phe	Met	Ser	Tyr	Glu	450	455	460
Glu	Ile	Cys	Pro	Gln	Arg	Glu	Lys	Asn	Ala	Thr	Gln	Pro	Cys	Gln	Trp	465	470	475
Val	Ser	Ala	Val	Asn	Val	Arg	Asn	Arg	Tyr	Ile	Tyr	Val	Ala	Gln	Pro	485	490	495
Ala	Leu	Ser	Arg	Val	Leu	Val	Val	Asp	Ile	Gln	Ala	Gln	Lys	Val	Leu	500	505	510
Gln	Ser	Ile	Gly	Val	Asp	Pro	Leu	Pro	Ala	Lys	Leu	Ser	Tyr	Asp	Lys	515	520	525
Ser	His	Asp	Gln	Val	Trp	Val	Leu	Ser	Trp	Gly	Asp	Val	His	Lys	Ser	530	535	540
Arg	Pro	Ser	Leu	Gln	Val	Ile	Thr	Glu	Ala	Ser	Thr	Gly	Gln	Ser	Gln	545	550	555
His	Leu	Ile	Arg	Thr	Pro	Phe	Ala	Gly	Val	Asp	Asp	Phe	Phe	Ile	Pro	565	570	575
Pro	Thr	Asn	Leu	Ile	Ile	Asn	His	Ile	Arg	Phe	Gly	Phe	Ile	Phe	Asn	580	585	590

Lys Ser Asp Pro Ala Val His Lys Val Asp Leu Glu Thr Met Met Pro
 595 600 605
 Leu Lys Thr Ile Gly Leu His His His Gly Cys Val Pro Gln Ala Met
 610 615 620
 Ala His Thr His Leu Gly Gly Tyr Phe Phe Ile Gln Cys Arg Gln Asp
 625 630 635 640
 Ser Pro Ala Ser Ala Ala Arg Gln Leu Leu Val Asp Ser Val Thr Asp
 645 650 655
 Ser Val Leu Gly Pro Asn Gly Asp Val Thr Gly Thr Pro His Thr Ser
 660 665 670
 Pro Asp Gly Arg Phe Ile Val Ser Ala Ala Ala Asp Ser Pro Trp Leu
 675 680 685
 His Val Gln Glu Ile Thr Val Arg Gly Glu Ile Gln Thr Leu Tyr Asp
 690 695 700
 Leu Gln Ile Asn Ser Gly Ile Ser Asp Leu Ala Phe Gln Arg Ser Phe
 705 710 715 720
 Thr Glu Ser Asn Gln Tyr Asn Ile Tyr Ala Ala Leu His Thr Glu Pro
 725 730 735
 Asp Leu Leu Phe Leu Glu Leu Ser Thr Gly Lys Val Gly Met Leu Lys
 740 745 750
 Asn Leu Lys Glu Pro Pro Ala Gly Pro Ala Gln Pro Trp Gly Gly Thr
 755 760 765
 His Arg Ile Met Arg Asp Ser Gly Leu Phe Gly Gln Tyr Leu Leu Thr
 770 775 780
 Pro Ala Arg Glu Ser Leu Phe Leu Ile Asn Gly Arg Gln Asn Thr Leu
 785 790 795 800
 Arg Cys Glu Val Ser Gly Ile Lys Gly Gly Thr Thr Val Val Trp Val
 805 810 815
 Gly Glu Val
 819

<210> 1184
 <211> 837
 <212> PRT
 <213> Homo sapiens

<400> 1184
 Met Ala Arg Gly Glu Arg Arg Arg Arg Ala Val Pro Ala Glu Gly Val
 1 5 10 15
 Arg Thr Ala Glu Arg Ala Ala Arg Gly Gly Pro Gly Arg Arg Asp Gly
 20 25 30
 Arg Gly Gly Gly Pro Arg Ser Thr Ala Gly Gly Val Ala Leu Ala Val
 35 40 45
 Val Val Leu Ser Leu Ala Leu Gly Met Ser Gly Arg Trp Val Leu Ala
 50 55 60
 Trp Tyr Arg Ala Arg Arg Ala Val Thr Leu His Ser Ala Pro Pro Val
 65 70 75 80
 Leu Pro Ala Asp Ser Ser Ser Pro Ala Val Ala Pro Asp Leu Phe Trp
 85 90 95
 Gly Thr Tyr Arg Pro His Val Tyr Phe Gly Met Lys Thr Arg Ser Pro
 100 105 110
 Lys Pro Leu Leu Thr Gly Leu Met Trp Ala Gln Gln Gly Thr Thr Pro
 115 120 125
 Gly Thr Pro Lys Leu Arg His Thr Cys Glu Gln Gly Asp Gly Val Gly
 130 135 140
 Pro Tyr Gly Trp Glu Phe His Asp Gly Leu Ser Phe Gly Arg Gln His
 145 150 155 160
 Ile Gln Asp Gly Ala Leu Arg Leu Thr Thr Glu Phe Val Lys Arg Pro
 165 170 175
 Gly Gly Gln His Gly Gly Asp Trp Ser Trp Arg Val Thr Val Glu Pro
 180 185 190

Gln	Asp	Ser	Gly	Thr	Ser	Ala	Leu	Pro	Leu	Val	Ser	Leu	Phe	Phe	Tyr
	195						200					205			
Val	Val	Thr	Asp	Gly	Lys	Glu	Val	Leu	Leu	Pro	Glu	Val	Gly	Ala	Lys
	210						215				220				
Gly	Gln	Leu	Lys	Phe	Ile	Ser	Gly	His	Thr	Ser	Glu	Leu	Gly	Asp	Phe
225					230					235					240
Arg	Phe	Thr	Leu	Leu	Pro	Pro	Thr	Ser	Pro	Gly	Asp	Thr	Ala	Pro	Lys
			245						250					255	
Tyr	Gly	Ser	Tyr	Asn	Val	Phe	Trp	Thr	Ser	Asn	Pro	Gly	Leu	Pro	Leu
			260					265					270		
Leu	Thr	Glu	Met	Val	Lys	Ser	Arg	Leu	Asn	Ser	Trp	Phe	Gln	His	Arg
	275						280					285			
Pro	Pro	Gly	Ala	Ser	Pro	Glu	Arg	Tyr	Leu	Gly	Leu	Pro	Gly	Ser	Leu
	290						295				300				
Lys	Trp	Glu	Asp	Arg	Gly	Pro	Ser	Gly	Gln	Gly	Gln	Gly	Gln	Phe	Leu
305					310					315					320
Ile	Gln	Gln	Val	Thr	Leu	Lys	Ile	Pro	Ile	Ser	Ile	Glu	Phe	Val	Phe
			325						330					335	
Glu	Ser	Gly	Ser	Ala	Gln	Ala	Gly	Gly	Asn	Gln	Ala	Leu	Pro	Arg	Leu
			340					345					350		
Ala	Gly	Ser	Leu	Leu	Thr	Gln	Ala	Leu	Glu	Ser	His	Ala	Glu	Gly	Phe
	355						360					365			
Arg	Glu	Arg	Phe	Glu	Lys	Thr	Phe	Gln	Leu	Lys	Glu	Lys	Gly	Leu	Ser
	370					375					380				
Ser	Gly	Glu	Gln	Val	Leu	Gly	Gln	Ala	Ala	Leu	Ser	Gly	Leu	Leu	Gly
385					390					395					400
Gly	Ile	Gly	Tyr	Phe	Tyr	Gly	Gln	Gly	Leu	Val	Leu	Pro	Asp	Ile	Gly
			405						410					415	
Val	Glu	Gly	Ser	Glu	Gln	Lys	Val	Asp	Pro	Ala	Leu	Phe	Pro	Pro	Val
			420					425					430		
Pro	Leu	Phe	Thr	Ala	Val	Pro	Ser	Arg	Ser	Phe	Phe	Pro	Arg	Gly	Phe
	435						440					445			
Leu	Trp	Asp	Glu	Gly	Phe	His	Gln	Leu	Val	Val	Gln	Arg	Trp	Asp	Pro
	450					455					460				
Ser	Leu	Thr	Arg	Glu	Ala	Leu	Gly	His	Trp	Leu	Gly	Leu	Leu	Asn	Ala
465					470					475					480
Asp	Gly	Trp	Ile	Gly	Arg	Glu	Gln	Ile	Leu	Gly	Asp	Glu	Ala	Arg	Ala
			485						490					495	
Arg	Val	Pro	Pro	Glu	Phe	Leu	Val	Gln	Arg	Ala	Val	His	Ala	Asn	Pro
			500					505					510		
Pro	Thr	Leu	Leu	Leu	Pro	Val	Ala	His	Met	Leu	Glu	Val	Gly	Asp	Pro
	515						520					525			
Asp	Asp	Leu	Ala	Phe	Leu	Arg	Lys	Ala	Leu	Pro	Arg	Leu	His	Ala	Trp
	530					535					540				
Phe	Ser	Trp	Leu	His	Gln	Ser	Gln	Ala	Gly	Pro	Leu	Pro	Leu	Ser	Tyr
545					550					555					560
Arg	Trp	Arg	Gly	Arg	Asp	Pro	Ala	Leu	Pro	Thr	Leu	Leu	Asn	Pro	Lys
				565					570					575	
Thr	Leu	Pro	Ser	Gly	Leu	Asp	Asp	Tyr	Pro	Arg	Ala	Ser	His	Pro	Ser
			580					585					590		
Val	Thr	Glu	Arg	His	Leu	Asp	Leu	Arg	Cys	Trp	Val	Ala	Leu	Gly	Ala
	595						600					605			
Arg	Val	Leu	Thr	Arg	Leu	Ala	Glu	His	Leu	Gly	Glu	Ala	Glu	Val	Ala
	610					615					620				
Ala	Glu	Leu	Gly	Pro	Leu	Ala	Ala	Ser	Leu	Glu	Ala	Ala	Glu	Ser	Leu
625					630					635					640
Asp	Glu	Leu	His	Trp	Ala	Pro	Glu	Leu	Gly	Val	Phe	Ala	Asp	Phe	Gly
			645						650					655	
Asn	His	Thr	Lys	Ala	Val	Gln	Leu	Lys	Pro	Arg	Pro	Pro	Gln	Gly	Leu
			660					665					670		
Val	Arg	Val	Val	Gly	Arg	Pro	Gln	Pro	Gln	Leu	Gln	Tyr	Val	Asp	Ala
		675					680					685			
Leu	Gly	Tyr	Val	Ser	Leu	Phe	Pro	Leu	Leu	Leu	Arg	Leu	Leu	Asp	Pro
	690					695					700				

Thr Ser Ser Arg Leu Gly Pro Leu Leu Asp Ile Leu Ala Asp Ser Arg
 705 710 715 720
 His Leu Trp Ser Pro Phe Gly Leu Arg Ser Leu Ala Ala Ser Ser Ser
 725 730 735
 Phe Tyr Gly Gln Arg Asn Ser Glu His Asp Pro Pro Tyr Trp Arg Gly
 740 745 750
 Ala Val Trp Leu Asn Val Asn Tyr Leu Ala Leu Gly Ala Leu His His
 755 760 765
 Tyr Gly His Leu Glu Gly Pro His Gln Ala Arg Ala Ala Lys Leu His
 770 775 780
 Gly Glu Leu Arg Ala Asn Val Val Gly Asn Val Trp Arg Gln Tyr Gln
 785 790 795 800
 Ala Thr Gly Phe Leu Trp Glu Gln Tyr Ser Asp Arg Asp Gly Arg Gly
 805 810 815
 Met Gly Cys Arg Pro Phe His Gly Trp Thr Ser Leu Val Leu Leu Ala
 820 825 830
 Met Ala Glu Asp Tyr
 835 837

<210> 1185
 <211> 1310
 <212> PRT
 <213> Homo sapiens

<400> 1185
 Met Leu Leu Asn Gly Asp Cys Pro Glu Ser Leu Lys Lys Glu Ala Ala
 1 5 10 15
 Ala Ala Glu Pro Pro Arg Glu Asn Gly Leu Asp Glu Ala Gly Pro Gly
 20 25 30
 Asp Glu Thr Thr Gly Gln Glu Ala Ile Val Ile Gln Asp Thr Gly Phe
 35 40 45
 Ser Val Lys Ile Leu Ala Pro Gly Ile Glu Pro Phe Ser Leu Gln Val
 50 55 60
 Ser Pro Gln Glu Met Val Gln Glu Ile His Gln Val Leu Met Asp Arg
 65 70 75 80
 Glu Asp Thr Cys His Arg Thr Cys Phe Ser Leu His Leu Asp Gly Asn
 85 90 95
 Val Leu Asp His Phe Ser Glu Leu Arg Ser Val Glu Gly Leu Gln Glu
 100 105 110
 Gly Ser Val Leu Arg Val Val Glu Glu Pro Tyr Thr Val Arg Glu Ala
 115 120 125
 Arg Ile His Val Arg His Val Arg Asp Leu Leu Lys Ser Leu Asp Pro
 130 135 140
 Ser Asp Ala Phe Asn Gly Val Asp Cys Asn Ser Leu Ser Phe Leu Ser
 145 150 155 160
 Val Phe Thr Asp Gly Asp Leu Gly Asp Ser Gly Lys Arg Lys Lys Gly
 165 170 175
 Leu Glu Met Asp Pro Ile Asp Cys Thr Pro Pro Glu Tyr Ile Leu Pro
 180 185 190
 Gly Ser Arg Glu Arg Pro Leu Cys Pro Leu Gln Pro Gln Asn Arg Asp
 195 200 205
 Trp Lys Pro Leu Gln Cys Leu Lys Val Leu Thr Met Ser Gly Trp Asn
 210 215 220
 Pro Pro Pro Gly Asn Arg Lys Met His Gly Asp Leu Met Tyr Leu Phe
 225 230 235 240
 Val Ile Thr Ala Glu Asp Arg Gln Val Ser Ile Thr Ala Ser Thr Arg
 245 250 255
 Gly Phe Tyr Leu Asn Gln Ser Thr Ala Tyr His Phe Asn Pro Lys Pro
 260 265 270
 Ala Ser Pro Arg Phe Leu Ser His Ser Leu Val Glu Leu Leu Asn Gln
 275 280 285

Ile	Ser	Pro	Thr	Phe	Lys	Lys	Asn	Phe	Ala	Val	Leu	Gln	Lys	Lys	Arg	290	295	300
Val	Gln	Arg	His	Pro	Phe	Glu	Arg	Ile	Ala	Thr	Pro	Phe	Gln	Val	Tyr	305	310	315
Ser	Trp	Thr	Ala	Pro	Gln	Ala	Glu	His	Ala	Met	Asp	Cys	Val	Arg	Ala	325	330	335
Glu	Asp	Ala	Tyr	Thr	Ser	Arg	Leu	Gly	Tyr	Glu	Glu	His	Ile	Pro	Gly	340	345	350
Gln	Thr	Arg	Asp	Trp	Asn	Glu	Glu	Leu	Gln	Thr	Thr	Arg	Glu	Leu	Pro	355	360	365
Arg	Lys	Asn	Leu	Pro	Glu	Arg	Leu	Leu	Arg	Glu	Arg	Ala	Ile	Phe	Lys	370	375	380
Val	His	Ser	Asp	Phe	Thr	Ala	Ala	Ala	Thr	Arg	Gly	Ala	Met	Ala	Val	385	390	395
Ile	Asp	Gly	Asn	Val	Met	Ala	Ile	Asn	Pro	Ser	Glu	Glu	Thr	Lys	Met	405	410	415
Gln	Met	Phe	Ile	Trp	Asn	Asn	Ile	Phe	Phe	Ser	Leu	Gly	Phe	Asp	Val	420	425	430
Arg	Asp	His	Tyr	Lys	Asp	Phe	Gly	Gly	Asp	Val	Ala	Ala	Tyr	Val	Ala	435	440	445
Pro	Thr	Asn	Asp	Leu	Asn	Gly	Val	Arg	Thr	Tyr	Asn	Ala	Val	Asp	Val	450	455	460
Glu	Gly	Leu	Tyr	Thr	Leu	Gly	Thr	Val	Val	Val	Asp	Tyr	Arg	Gly	Tyr	465	470	475
Arg	Val	Thr	Ala	Gln	Ser	Ile	Ile	Pro	Gly	Ile	Leu	Glu	Arg	Asp	Gln	485	490	495
Glu	Gln	Ser	Val	Ile	Tyr	Gly	Ser	Ile	Asp	Phe	Gly	Lys	Thr	Val	Val	500	505	510
Ser	His	Pro	Arg	Tyr	Leu	Glu	Leu	Leu	Glu	Arg	Thr	Ser	Arg	Pro	Leu	515	520	525
Lys	Ile	Leu	Arg	His	Gln	Val	Leu	Asn	Asp	Arg	Asp	Glu	Glu	Val	Glu	530	535	540
Leu	Cys	Ser	Ser	Val	Glu	Cys	Lys	Gly	Ile	Ile	Gly	Asn	Asp	Gly	Arg	545	550	555
His	Tyr	Ile	Leu	Asp	Leu	Leu	Arg	Thr	Phe	Pro	Pro	Asp	Leu	Asn	Phe	565	570	575
Leu	Pro	Val	Pro	Gly	Glu	Glu	Leu	Pro	Glu	Glu	Cys	Ala	Arg	Ala	Gly	580	585	590
Phe	Pro	Arg	Ala	His	Arg	His	Lys	Leu	Cys	Cys	Leu	Arg	Gln	Glu	Leu	595	600	605
Val	Asp	Ala	Phe	Val	Glu	His	Arg	Tyr	Leu	Leu	Phe	Met	Lys	Leu	Ala	610	615	620
Ala	Leu	Gln	Leu	Met	Gln	Gln	Asn	Ala	Ser	Gln	Leu	Glu	Thr	Pro	Ser	625	630	635
Ser	Leu	Glu	Asn	Gly	Gly	Pro	Ser	Ser	Leu	Glu	Ser	Lys	Ser	Glu	Asp	645	650	655
Pro	Pro	Gly	Gln	Glu	Ala	Gly	Ser	Glu	Glu	Glu	Gly	Ser	Ser	Ala	Ser	660	665	670
Gly	Leu	Ala	Lys	Val	Lys	Glu	Leu	Ala	Glu	Thr	Ile	Ala	Ala	Asp	Asp	675	680	685
Gly	Thr	Asp	Pro	Arg	Ser	Arg	Glu	Val	Ile	Arg	Asn	Ala	Cys	Lys	Ala	690	695	700
Val	Gly	Ser	Ile	Ser	Ser	Thr	Ala	Phe	Asp	Ile	Arg	Phe	Asn	Pro	Asp	705	710	715
Ile	Phe	Ser	Pro	Gly	Val	Arg	Phe	Pro	Glu	Ser	Cys	Gln	Asp	Glu	Val	725	730	735
Arg	Asp	Gln	Lys	Gln	Leu	Leu	Lys	Asp	Ala	Ala	Ala	Phe	Leu	Leu	Ser	740	745	750
Cys	Gln	Ile	Pro	Gly	Leu	Val	Lys	Asp	Cys	Met	Glu	His	Ala	Val	Leu	755	760	765
Pro	Val	Asp	Gly	Ala	Thr	Leu	Ala	Glu	Val	Met	Arg	Gln	Arg	Gly	Ile	770	775	780
Asn	Met	Arg	Tyr	Leu	Gly	Lys	Val	Leu	Glu	Leu	Val	Leu	Arg	Ser	Pro	785	790	795

Ala Arg His Gln Leu Asp His Val Phe Lys Ile Gly Ile Gly Glu Leu
 805 810 815
 Ile Thr Arg Ser Ala Lys His Ile Phe Lys Thr Tyr Leu Gln Gly Val
 820 825 830
 Glu Leu Ser Gly Leu Ser Ala Ala Ile Ser His Phe Leu Asn Cys Phe
 835 840 845
 Leu Ser Ser Tyr Pro Asn Pro Val Ala His Leu Pro Ala Asp Glu Leu
 850 855 860
 Val Ser Lys Lys Arg Asn Lys Arg Arg Lys Asn Arg Pro Pro Gly Ala
 865 870 875 880
 Ala Asp Asn Thr Ala Trp Ala Val Met Thr Pro Gln Glu Leu Trp Lys
 885 890 895
 Asn Ile Cys Gln Glu Ala Lys Asn Tyr Phe Asp Phe Asp Leu Glu Cys
 900 905 910
 Glu Thr Val Asp Gln Ala Val Glu Thr Tyr Gly Leu Gln Lys Ile Thr
 915 920 925
 Leu Leu Arg Glu Ile Ser Leu Lys Thr Gly Ile Gln Val Leu Leu Lys
 930 935 940
 Glu Tyr Ser Phe Asp Ser Arg His Lys Pro Ala Phe Thr Glu Glu Asp
 945 950 955 960
 Val Leu Asn Ile Phe Pro Val Val Lys His Val Asn Pro Lys Ala Ser
 965 970 975
 Asp Ala Phe His Phe Phe Gln Ser Gly Gln Ala Lys Val Gln Gln Gly
 980 985 990
 Phe Leu Lys Glu Gly Cys Glu Leu Ile Asn Glu Ala Leu Asn Leu Phe
 995 1000 1005
 Asn Asn Val Tyr Gly Ala Met His Val Glu Thr Cys Ala Cys Leu Arg
 1010 1015 1020
 Leu Leu Ala Arg Leu His Tyr Ile Met Gly Asp Tyr Ala Glu Ala Leu
 1025 1030 1035 1040
 Ser Asn Gln Gln Lys Ala Val Leu Met Ser Glu Arg Val Met Gly Thr
 1045 1050 1055
 Glu His Pro Asn Thr Ile Gln Glu Tyr Met His Leu Ala Leu Tyr Cys
 1060 1065 1070
 Phe Ala Ser Ser Gln Leu Ser Thr Ala Leu Ser Leu Leu Tyr Arg Ala
 1075 1080 1085
 Arg Tyr Leu Met Leu Leu Val Phe Gly Glu Asp His Pro Glu Met Ala
 1090 1095 1100
 Leu Leu Asp Asn Asn Ile Gly Leu Val Leu His Gly Val Met Glu Tyr
 1105 1110 1115 1120
 Asp Leu Ser Leu Arg Phe Leu Glu Asn Ala Leu Ala Val Ser Thr Lys
 1125 1130 1135
 Tyr His Gly Pro Lys Ala Leu Lys Val Ala Leu Ser His His Leu Val
 1140 1145 1150
 Ala Arg Val Tyr Glu Ser Lys Ala Glu Phe Arg Ser Ala Leu Gln His
 1155 1160 1165
 Glu Lys Glu Gly Tyr Thr Ile Tyr Lys Thr Gln Leu Gly Glu Asp His
 1170 1175 1180
 Glu Lys Thr Lys Glu Ser Ser Glu Tyr Leu Lys Cys Leu Thr Gln Gln
 1185 1190 1195 1200
 Ala Val Ala Leu Gln Arg Thr Met Asn Glu Ile Tyr Arg Asn Gly Ser
 1205 1210 1215
 Ser Ala Asn Ile Pro Pro Leu Lys Phe Thr Ala Pro Ser Met Ala Ser
 1220 1225 1230
 Val Leu Glu Gln Leu Asn Val Ile Asn Gly Ile Leu Phe Ile Pro Leu
 1235 1240 1245
 Ser Gln Lys Asp Leu Glu Asn Leu Lys Ala Glu Val Ala Arg Arg His
 1250 1255 1260
 Gln Leu Gln Glu Ala Ser Arg Asn Arg Asp Arg Ala Glu Glu Pro Met
 1265 1270 1275 1280
 Ala Thr Glu Pro Ala Pro Ala Gly Ala Pro Gly Asp Leu Gly Ser Gln
 1285 1290 1295
 Pro Pro Ala Ala Lys Asp Pro Ser Pro Ser Val Gln Gly *
 1300 1305 1309

<210> 1186
 <211> 1207
 <212> PRT
 <213> Homo sapiens

<400> 1186
 Met Leu Leu Thr Leu Ile Ile Leu Leu Pro Val Val Ser Lys Phe Ser
 1 5 10 15
 Phe Val Ser Leu Ser Ala Pro Gln His Trp Ser Cys Pro Glu Gly Thr
 20 25 30
 Leu Ala Gly Asn Gly Asn Ser Thr Cys Val Gly Pro Ala Pro Phe Leu
 35 40 45
 Ile Phe Ser His Gly Asn Ser Ile Phe Arg Ile Asp Thr Glu Gly Thr
 50 55 60
 Asn Tyr Glu Gln Leu Val Val Asp Ala Gly Val Ser Val Ile Met Asp
 65 70 75 80
 Phe His Tyr Asn Glu Lys Arg Ile Tyr Trp Val Asp Leu Glu Arg Gln
 85 90 95
 Leu Leu Gln Arg Val Phe Leu Asn Gly Ser Arg Gln Glu Arg Val Cys
 100 105 110
 Asn Ile Glu Lys Asn Val Ser Gly Met Ala Ile Asn Trp Ile Asn Glu
 115 120 125
 Glu Val Ile Trp Ser Asn Gln Gln Gly Ile Ile Thr Val Thr Asp
 130 135 140
 Met Lys Gly Asn Asn Ser His Ile Leu Leu Ser Ala Leu Lys Tyr Pro
 145 150 155 160
 Ala Asn Val Ala Val Asp Pro Val Glu Arg Phe Ile Phe Trp Ser Ser
 165 170 175
 Glu Val Ala Gly Ser Leu Tyr Arg Ala Asp Leu Asp Gly Val Gly Val
 180 185 190
 Lys Ala Leu Leu Glu Thr Ser Glu Lys Ile Thr Ala Val Ser Leu Asp
 195 200 205
 Val Leu Asp Lys Arg Leu Phe Trp Ile Gln Tyr Asn Arg Glu Gly Ser
 210 215 220
 Asn Ser Leu Ile Cys Ser Cys Asp Tyr Asp Gly Gly Ser Val His Ile
 225 230 235 240
 Ser Lys His Pro Thr Gln His Asn Leu Phe Ala Met Ser Leu Phe Gly
 245 250 255
 Asp Arg Ile Phe Tyr Ser Thr Trp Lys Met Lys Thr Ile Trp Ile Ala
 260 265 270
 Asn Lys His Thr Gly Lys Asp Met Val Arg Ile Asn Leu His Ser Ser
 275 280 285
 Phe Val Pro Leu Gly Glu Leu Lys Val Val His Pro Leu Ala Gln Pro
 290 295 300
 Lys Ala Glu Asp Asp Thr Trp Glu Pro Glu Gln Lys Leu Cys Lys Leu
 305 310 315 320
 Arg Lys Gly Asn Cys Ser Ser Thr Val Cys Gly Gln Asp Leu Gln Ser
 325 330 335
 His Leu Cys Met Cys Ala Glu Gly Tyr Ala Leu Ser Arg Asp Arg Lys
 340 345 350
 Tyr Cys Glu Asp Val Asn Glu Cys Ala Phe Trp Asn His Gly Cys Thr
 355 360 365
 Leu Gly Cys Lys Asn Thr Pro Gly Ser Tyr Tyr Cys Thr Cys Pro Val
 370 375 380
 Gly Phe Val Leu Leu Pro Asp Gly Lys Arg Cys His Gln Leu Val Ser
 385 390 395 400
 Cys Pro Arg Asn Val Ser Glu Cys Ser His Asp Cys Val Leu Thr Ser
 405 410 415
 Glu Gly Pro Leu Cys Phe Cys Pro Glu Gly Ser Val Leu Glu Arg Asp
 420 425 430

2951

Ser Glu Pro Gly Leu Ile Cys Pro Asp Ser Thr Pro Pro Pro His Leu
 945 950 955 960
 Arg Glu Asp Asp His His Tyr Ser Val Arg Asn Ser Asp Ser Glu Cys
 965 970 975
 Pro Leu Ser His Asp Gly Tyr Cys Leu His Asp Gly Val Cys Met Tyr
 980 985 990
 Ile Glu Ala Leu Asp Lys Tyr Ala Cys Asn Cys Val Val Gly Tyr Ile
 995 1000 1005
 Gly Glu Arg Cys Gln Tyr Arg Asp Leu Lys Trp Trp Glu Leu Arg His
 1010 1015 1020
 Ala Gly His Gly Gln Gln Gln Lys Val Ile Val Val Ala Val Cys Val
 1025 1030 1035 1040
 Val Val Leu Val Met Leu Leu Leu Leu Ser Leu Trp Gly Ala His Tyr
 1045 1050 1055
 Tyr Arg Thr Gln Lys Leu Leu Ser Lys Asn Pro Lys Asn Pro Tyr Glu
 1060 1065 1070
 Glu Ser Ser Arg Asp Val Arg Ser Arg Arg Pro Ala Asp Thr Glu Asp
 1075 1080 1085
 Gly Met Ser Ser Cys Pro Gln Pro Trp Phe Val Val Ile Lys Glu His
 1090 1095 1100
 Gln Asp Leu Lys Asn Gly Gly Gln Pro Val Ala Gly Glu Asp Gly Gln
 1105 1110 1115 1120
 Ala Ala Asp Gly Ser Met Gln Pro Thr Ser Trp Arg Gln Glu Pro Gln
 1125 1130 1135
 Leu Cys Gly Met Gly Thr Glu Gln Gly Cys Trp Ile Pro Val Ser Ser
 1140 1145 1150
 Asp Lys Gly Ser Cys Pro Gln Val Met Glu Arg Ser Phe His Met Pro
 1155 1160 1165
 Ser Tyr Gly Thr Gln Thr Leu Glu Gly Gly Val Glu Lys Pro His Ser
 1170 1175 1180
 Leu Leu Ser Ala Asn Pro Leu Trp Gln Gln Arg Ala Leu Asp Pro Pro
 1185 1190 1195 1200
 His Gln Met Glu Leu Thr Gln
 1205 1207

<210> 1187
 <211> 84
 <212> PRT
 <213> Homo sapiens

<400> 1187
 Met Ala Thr Met Glu Asn Lys Val Ile Cys Ala Leu Val Leu Val Ser
 1 5 10 15
 Met Leu Ala Leu Gly Thr Leu Ala Glu Ala Gln Thr Glu Thr Cys Thr
 20 25 30
 Val Ala Pro Arg Glu Arg Gln Asn Cys Gly Phe Pro Gly Val Thr Pro
 35 40 45
 Ser Gln Cys Ala Asn Lys Gly Cys Cys Phe Asp Asp Thr Val Arg Gly
 50 55 60
 Val Pro Trp Cys Phe Tyr Pro Asn Thr Ile Asp Val Pro Pro Glu Glu
 65 70 75 80
 Glu Cys Glu Phe
 84

<210> 1188
 <211> 558
 <212> PRT
 <213> Homo sapiens

<400> 1188

```

Met Ala Lys Ser Asn Gly Glu Asn Gly Pro Arg Ala Pro Ala Ala Gly
 1          5          10          15
Glu Ser Leu Ser Gly Thr Arg Glu Ser Leu Ala Gln Gly Pro Asp Ala
 20          25          30
Ala Thr Thr Asp Glu Leu Ser Ser Leu Gly Ser Asp Ser Glu Ala Asn
 35          40          45
Gly Phe Ala Glu Arg Arg Ile Asp Lys Phe Gly Phe Ile Val Gly Ser
 50          55          60
Gln Gly Ala Glu Gly Ala Ser Ile Leu Gly Gln Thr Val Pro Ser Pro
 65          70          75          80
His Gly Arg Val Gly Glu Gly Pro Pro Ile Arg Ser Tyr Thr Ala Ser
 85          90          95
Ser Thr Gly Thr Gly Asn Arg Leu Glu Glu Val Pro Leu Glu Val Leu
100          105          110
Arg Gln Arg Glu Ser Lys Trp Leu Asp Met Leu Asn Asn Trp Asp Lys
115          120          125
Trp Met Ala Lys Lys His Lys Lys Ile Arg Leu Arg Cys Gln Lys Gly
130          135          140
Ile Pro Pro Ser Leu Arg Gly Arg Ala Trp Gln Tyr Leu Ser Gly Gly
145          150          155          160
Lys Val Lys Leu Gln Gln Asn Pro Gly Lys Phe Asp Glu Leu Asp Met
165          170          175
Ser Pro Gly Asp Pro Lys Trp Leu Asp Val Ile Glu Arg Asp Leu His
180          185          190
Arg Gln Phe Pro Phe His Glu Met Phe Val Ser Arg Gly Gly His Gly
195          200          205
Gln Gln Asp Leu Phe Arg Val Leu Lys Ala Tyr Thr Leu Tyr Arg Pro
210          215          220
Glu Glu Gly Tyr Cys Gln Ala Gln Ala Pro Ile Ala Ala Val Leu Leu
225          230          235          240
Met His Met Pro Ala Glu Gln Ala Phe Trp Cys Leu Val Gln Ile Cys
245          250          255
Glu Lys Tyr Leu Pro Gly Tyr Tyr Ser Glu Lys Leu Glu Ala Ile Gln
260          265          270
Leu Asp Gly Glu Ile Leu Phe Ser Leu Leu Gln Lys Val Ser Pro Val
275          280          285
Ala His Lys His Leu Ser Arg Gln Lys Ile Asp Pro Leu Leu Tyr Met
290          295          300
Thr Glu Trp Phe Met Cys Ala Phe Ser Arg Thr Leu Pro Trp Ser Ser
305          310          315          320
Val Leu Arg Val Trp Asp Met Phe Phe Cys Glu Glu Lys Pro Gln Lys
325          330          335
Ala Ser Leu Tyr Leu Leu Pro Ile Pro His Ala Gly Val Lys Ile Ile
340          345          350
Phe Arg Val Gly Leu Val Leu Leu Lys His Ala Leu Gly Ser Pro Glu
355          360          365
Lys Val Lys Ala Cys Gln Gly Gln Tyr Glu Thr Ile Glu Arg Leu Arg
370          375          380
Ser Leu Ser Pro Lys Ile Met Gln Glu Ala Phe Leu Val Gln Glu Val
385          390          395          400
Val Glu Leu Pro Val Thr Glu Arg Gln Ile Glu Arg Glu His Leu Ile
405          410          415
Gln Leu Arg Arg Trp Gln Glu Thr Arg Gly Glu Leu Gln Cys Arg Ser
420          425          430
Pro Pro Arg Leu His Gly Ala Lys Ala Ile Leu Asp Ala Glu Pro Gly
435          440          445
Pro Arg Pro Ala Leu Gln Pro Ser Pro Ser Ile Arg Leu Pro Leu Asp
450          455          460
Ala Pro Leu Pro Gly Ser Lys Ala Lys Pro Lys Pro Pro Lys Gln Ala
465          470          475          480
Gln Lys Glu Gln Arg Lys Gln Met Lys Gly Arg Gly Gln Leu Glu Lys
485          490          495

```

```

Pro Pro Ala Pro Asn Gln Ala Met Val Val Ala Ala Ala Gly Asp Ala
      500      505      510
Cys Pro Pro Gln His Val Pro Pro Lys Asp Ser Ala Pro Lys Asp Ser
      515      520      525
Ala Pro Gln Asp Leu Ala Pro Gln Val Ser Ala His His Arg Ser Gln
      530      535      540
Glu Ser Leu Thr Ser Gln Glu Ser Glu Asp Thr Tyr Leu *
545      550      555      557

```

```

<210> 1189
<211> 196
<212> PRT
<213> Homo sapiens

```

```

<400> 1189
Met Gly Ser Arg Ser Ser His Ala Ala Val Ile Pro Asp Gly Asp Ser
 1      5      10      15
Ile Arg Arg Glu Thr Gly Phe Ser Gln Ala Ser Leu Leu Arg Leu His
      20      25      30
His Arg Phe Arg Ala Leu Asp Arg Asn Lys Lys Gly Tyr Leu Ser Arg
      35      40      45
Met Asp Leu Gln Gln Ile Gly Ala Leu Ala Val Asn Pro Leu Gly Asp
      50      55      60
Arg Ile Ile Glu Ser Phe Phe Pro Asp Gly Ser Gln Arg Val Asp Phe
      65      70      75      80
Pro Gly Phe Val Arg Val Leu Ala His Phe Arg Pro Val Glu Asp Glu
      85      90      95
Asp Thr Glu Thr Gln Asp Pro Lys Lys Pro Glu Pro Leu Asn Ser Arg
      100      105      110
Arg Asn Lys Leu His Tyr Ala Phe Gln Leu Tyr Asp Leu Asp Arg Asp
      115      120      125
Gly Lys Ile Ser Arg His Glu Met Leu Gln Val Leu Arg Leu Met Val
      130      135      140
Gly Val Gln Val Thr Glu Glu Gln Leu Glu Asn Ile Ala Asp Arg Thr
      145      150      155      160
Val Gln Glu Ala Asp Glu Asp Gly Asp Gly Ala Val Ser Phe Val Glu
      165      170      175
Phe Thr Lys Ser Leu Glu Lys Met Asp Val Glu Gln Lys Met Ser Ile
      180      185      190
Arg Ile Leu Lys
      195 196

```

```

<210> 1190
<211> 123
<212> PRT
<213> Homo sapiens

```

```

<400> 1190
Met Ser Thr Leu Ser Asn Phe Thr Gln Thr Leu Glu Asp Val Phe Arg
 1      5      10      15
Arg Ile Phe Ile Thr Tyr Met Asp Asn Trp Arg Gln Asn Thr Thr Ala
      20      25      30
Glu Gln Glu Ala Leu Gln Ala Lys Val Asp Ala Glu Asn Phe Tyr Tyr
      35      40      45
Val Ile Leu Tyr Leu Met Val Met Ile Gly Met Phe Ser Phe Ile Ile
      50      55      60
Val Ala Ile Leu Val Ser Thr Val Lys Ser Lys Arg Arg Glu His Ser
      65      70      75      80

```

Asn Asp Pro Tyr His Gln Tyr Ile Val Glu Asp Trp Gln Glu Lys Tyr
 85 90 95
 Lys Ser Gln Ile Leu Asn Leu Glu Glu Ser Lys Ala Thr Ile His Glu
 100 105 110
 Asn Ile Gly Ala Ala Gly Phe Lys Met Ser Pro
 115 120 123

<210> 1191
 <211> 129
 <212> PRT
 <213> Homo sapiens

<400> 1191
 Met Gly Arg Arg Asp Ala Gln Leu Leu Ala Ala Leu Leu Val Leu Gly
 1 5 10 15
 Leu Cys Ala Leu Ala Gly Ser Glu Lys Pro Ser Pro Cys Gln Cys Ser
 20 25 30
 Arg Leu Ser Pro His Asn Arg Thr Asn Cys Gly Phe Pro Gly Ile Thr
 35 40 45
 Ser Asp Gln Cys Phe Asp Asn Gly Cys Cys Phe Asp Ser Ser Val Thr
 50 55 60
 Gly Val Pro Trp Cys Phe His Pro Leu Pro Lys Gln Glu Ser Asp Gln
 65 70 75 80
 Cys Val Met Glu Val Ser Asp Arg Arg Asn Cys Gly Tyr Pro Gly Ile
 85 90 95
 Ser Pro Glu Glu Cys Ala Ser Arg Lys Cys Cys Phe Ser Asn Phe Ile
 100 105 110
 Phe Glu Val Pro Trp Cys Phe Phe Pro Lys Ser Val Glu Asp Cys His
 115 120 125
 Tyr
 129

<210> 1192
 <211> 68
 <212> PRT
 <213> Homo sapiens

<400> 1192
 Met Val Tyr Tyr Pro Glu Leu Phe Val Trp Val Ser Gln Glu Pro Phe
 1 5 10 15
 Pro Asn Lys Asp Met Glu Gly Arg Leu Pro Lys Gly Arg Leu Pro Val
 20 25 30
 Pro Lys Glu Val Asn Arg Lys Lys Asn Asp Glu Thr Asn Ala Ala Ser
 35 40 45
 Leu Thr Pro Leu Gly Ser Ser Glu Leu Arg Ser Pro Arg Ile Ser Tyr
 50 55 60
 Leu His Phe Phe
 65 68

<210> 1193
 <211> 152
 <212> PRT
 <213> Homo sapiens

<400> 1193

```

Met Ser Leu Val Ile Pro Glu Lys Phe Gln His Ile Leu Arg Val Leu
 1           5           10           15
Asn Thr Asn Ile Asp Gly Arg Arg Lys Ile Ala Phe Ala Ile Thr Ala
      20           25           30
Ile Lys Gly Val Gly Arg Arg Tyr Ala His Val Val Leu Arg Lys Ala
      35           40           45
Asp Ile Asp Leu Thr Lys Arg Ala Gly Glu Leu Thr Glu Asp Glu Val
      50           55           60
Glu Arg Val Ile Thr Ile Met Gln Asn Pro Arg Gln Tyr Lys Ile Pro
      65           70           75           80
Asp Trp Phe Leu Asn Arg Gln Lys Asp Val Lys Asp Gly Lys Tyr Ser
      85           90           95
Gln Val Leu Ala Asn Gly Leu Asp Asn Lys Leu Arg Glu Asp Leu Glu
      100          105          110
Arg Leu Lys Lys Ile Arg Ala His Arg Gly Leu Arg His Phe Trp Gly
      115          120          125
Leu Arg Val Arg Gly Gln His Thr Lys Thr Thr Gly Arg Arg Gly Arg
      130          135          140
Thr Val Gly Val Ser Lys Lys Lys
145           150           152

```

<210> 1194
 <211> 645
 <212> PRT
 <213> Homo sapiens

```

<400> 1194
Met Pro Arg Ser Arg Gly Gly Arg Ala Ala Pro Gly Pro Pro Pro
 1           5           10           15
Pro Pro Pro Pro Gly Gln Ala Pro Arg Trp Ser Arg Trp Arg Val Pro
      20           25           30
Gly Arg Leu Leu Leu Leu Leu Leu Pro Ala Leu Cys Cys Leu Pro Gly
      35           40           45
Ala Ala Arg Ala Ala Ala Ala Ala Ala Gly Ala Gly Asn Arg Ala Ala
      50           55           60
Val Ala Val Ala Val Ala Arg Ala Asp Glu Ala Glu Ala Pro Phe Ala
      65           70           75           80
Gly Gln Asn Trp Leu Lys Ser Tyr Gly Tyr Leu Leu Pro Tyr Asp Ser
      85           90           95
Arg Ala Ser Ala Leu His Ser Ala Lys Ala Leu Gln Ser Ala Val Ser
      100          105          110
Thr Met Gln Gln Phe Tyr Gly Ile Pro Val Thr Gly Val Leu Asp Gln
      115          120          125
Thr Thr Ile Glu Trp Met Lys Lys Pro Arg Cys Gly Val Pro Asp His
      130          135          140
Pro His Leu Ser Arg Arg Arg Arg Asn Lys Arg Tyr Ala Leu Thr Gly
145           150           155           160
Gln Lys Trp Arg Gln Lys His Ile Thr Tyr Ser Ile His Asn Tyr Thr
      165          170          175
Pro Lys Val Gly Glu Leu Asp Thr Arg Lys Ala Ile Arg Gln Ala Phe
      180          185          190
Asp Val Trp Gln Lys Val Thr Pro Leu Thr Phe Glu Glu Val Pro Tyr
      195          200          205
His Glu Ile Lys Ser Asp Arg Lys Glu Ala Asp Ile Met Ile Phe Phe
      210          215          220
Ala Ser Gly Phe His Gly Asp Ser Ser Pro Phe Asp Gly Glu Gly Gly
225           230           235           240
Phe Leu Ala His Ala Tyr Phe Pro Gly Pro Gly Ile Gly Gly Asp Thr
      245          250          255
His Phe Asp Ser Asp Glu Pro Trp Thr Leu Gly Asn Ala Asn His Asp
260           265           270

```

Gly Asn Asp Leu Phe Leu Val Ala Val His Glu Leu Gly His Ala Leu
 275 280 285
 Gly Leu Glu His Ser Ser Asp Pro Ser Ala Ile Met Ala Pro Phe Tyr
 290 295 300
 Gln Tyr Met Glu Thr His Asn Phe Lys Leu Pro Gln Asp Asp Leu Gln
 305 310 315 320
 Gly Ile Gln Lys Ile Tyr Gly Pro Pro Ala Glu Pro Leu Glu Pro Thr
 325 330 335
 Arg Pro Leu Pro Thr Leu Pro Val Arg Arg Ile His Ser Pro Ser Glu
 340 345 350
 Arg Lys His Glu Arg Gln Pro Arg Pro Pro Arg Pro Pro Leu Gly Asp
 355 360 365
 Arg Pro Ser Thr Pro Gly Thr Lys Pro Asn Ile Cys Asp Gly Asn Phe
 370 375 380
 Asn Thr Val Ala Leu Phe Arg Gly Glu Met Phe Val Phe Lys Asp Arg
 385 390 395 400
 Trp Phe Trp Arg Leu Arg Asn Asn Arg Val Gln Glu Gly Tyr Pro Met
 405 410 415
 Gln Ile Glu Gln Phe Trp Lys Gly Leu Pro Ala Arg Ile Asp Ala Ala
 420 425 430
 Tyr Glu Arg Ala Asp Gly Arg Phe Val Phe Phe Lys Gly Asp Lys Tyr
 435 440 445
 Trp Val Phe Lys Glu Val Thr Val Glu Pro Gly Tyr Pro His Ser Leu
 450 455 460
 Gly Glu Leu Gly Ser Cys Leu Pro Arg Glu Gly Ile Asp Thr Ala Leu
 465 470 475 480
 Arg Trp Glu Pro Val Gly Lys Thr Tyr Phe Phe Lys Gly Glu Arg Tyr
 485 490 495
 Trp Arg Tyr Ser Glu Glu Arg Arg Ala Thr Asp Pro Gly Tyr Pro Lys
 500 505 510
 Pro Ile Thr Val Trp Lys Gly Ile Pro Gln Ala Pro Gln Gly Ala Phe
 515 520 525
 Ile Ser Lys Glu Gly Tyr Tyr Thr Tyr Phe Tyr Lys Gly Arg Asp Tyr
 530 535 540
 Trp Lys Phe Asp Asn Gln Lys Leu Ser Val Glu Pro Gly Tyr Pro Arg
 545 550 555 560
 Asn Ile Leu Arg Asp Trp Met Gly Cys Asn Gln Lys Glu Val Glu Arg
 565 570 575
 Arg Lys Glu Arg Arg Leu Pro Gln Asp Asp Val Asp Ile Met Val Thr
 580 585 590
 Ile Asn Asp Val Pro Gly Ser Val Asn Ala Val Ala Val Val Ile Pro
 595 600 605
 Cys Ile Leu Ser Leu Cys Ile Leu Val Leu Val Tyr Thr Ile Phe Gln
 610 615 620
 Phe Lys Asn Lys Thr Gly Pro Gln Pro Val Thr Tyr Tyr Lys Arg Pro
 625 630 635 640
 Val Gln Glu Trp Val
 645

<210> 1195
 <211> 526
 <212> PRT
 <213> Homo sapiens

<400> 1195
 Met Ala Ser Gly Pro His Ser Thr Ala Thr Ala Ala Ala Ala Ala Ser
 1 5 10 15
 Ser Ala Ala Pro Ser Ala Gly Gly Ser Ser Ser Gly Thr Thr Thr
 20 25 30
 Thr Thr Thr Thr Thr Gly Gly Ile Leu Ile Gly Asp Arg Leu Tyr Ser
 35 40 45

Glu	Val	Ser	Leu	Thr	Ile	Asp	His	Ser	Leu	Ile	Pro	Glu	Glu	Arg	Leu
50						55					60				
Ser	Pro	Thr	Pro	Ser	Met	Gln	Asp	Gly	Leu	Asp	Leu	Pro	Ser	Glu	Thr
65					70					75					80
Asp	Leu	Arg	Ile	Leu	Gly	Cys	Glu	Leu	Ile	Gln	Ala	Ala	Gly	Ile	Leu
				85					90					95	
Leu	Arg	Leu	Pro	Gln	Val	Ala	Met	Ala	Thr	Gly	Gln	Val	Leu	Phe	His
			100					105					110		
Arg	Phe	Phe	Tyr	Ser	Lys	Ser	Phe	Val	Lys	His	Ser	Phe	Glu	Ile	Val
	115						120					125			
Ala	Met	Ala	Cys	Ile	Asn	Leu	Ala	Ser	Lys	Ile	Glu	Glu	Ala	Pro	Arg
130						135					140				
Arg	Ile	Arg	Asp	Val	Ile	Asn	Val	Phe	His	His	Leu	Arg	Gln	Leu	Arg
145				150						155					160
Gly	Lys	Arg	Thr	Pro	Ser	Pro	Leu	Ile	Leu	Asp	Gln	Asn	Tyr	Ile	Asn
				165					170					175	
Thr	Lys	Asn	Gln	Val	Ile	Lys	Ala	Glu	Arg	Arg	Val	Leu	Lys	Glu	Leu
			180					185					190		
Gly	Phe	Cys	Val	His	Val	Lys	His	Pro	His	Lys	Ile	Ile	Val	Met	Tyr
	195						200					205			
Leu	Gln	Val	Leu	Glu	Cys	Glu	Arg	Asn	Gln	Thr	Leu	Val	Gln	Thr	Ala
210						215					220				
Trp	Asn	Tyr	Met	Asn	Asp	Ser	Leu	Arg	Thr	Asn	Val	Phe	Val	Arg	Phe
225					230					235					240
Gln	Pro	Glu	Thr	Ile	Ala	Cys	Ala	Cys	Ile	Tyr	Leu	Ala	Ala	Arg	Ala
				245					250					255	
Leu	Gln	Ile	Pro	Leu	Pro	Thr	Arg	Pro	His	Trp	Phe	Leu	Leu	Phe	Gly
			260					265					270		
Thr	Thr	Glu	Glu	Glu	Ile	Gln	Glu	Ile	Cys	Ile	Glu	Thr	Leu	Arg	Leu
		275				280						285			
Tyr	Thr	Arg	Lys	Lys	Pro	Asn	Tyr	Glu	Leu	Leu	Glu	Lys	Glu	Val	Glu
	290					295					300				
Lys	Arg	Lys	Val	Ala	Leu	Gln	Glu	Ala	Lys	Leu	Lys	Ala	Lys	Gly	Leu
305					310					315					320
Asn	Pro	Asp	Gly	Thr	Pro	Ala	Leu	Ser	Thr	Leu	Gly	Gly	Phe	Ser	Pro
				325					330					335	
Ala	Ser	Lys	Pro	Ser	Ser	Pro	Arg	Glu	Val	Lys	Ala	Glu	Glu	Lys	Ser
			340					345					350		
Pro	Ile	Ser	Ile	Asn	Val	Lys	Thr	Val	Lys	Lys	Glu	Pro	Glu	Asp	Arg
	355						360						365		
Gln	Gln	Ala	Ser	Lys	Ser	Pro	Tyr	Asn	Gly	Val	Arg	Lys	Asp	Ser	Lys
	370					375					380				
Arg	Ser	Arg	Asn	Ser	Arg	Ser	Ala	Ser	Arg	Ser	Arg	Ser	Arg	Thr	Arg
385					390					395					400
Ser	Arg	Ser	Arg	Ser	His	Thr	Pro	Arg	Arg	His	Tyr	Asn	Asn	Arg	Arg
				405					410					415	
Ser	Arg	Ser	Gly	Thr	Tyr	Ser	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser
			420					425					430		
His	Ser	Glu	Ser	Pro	Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu
	435						440					445			
Lys	Ala	Lys	His	Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly
	450					455					460				
His	Lys	Arg	Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp
465					470					475					480
His	Ser	Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg
				485					490					495	
Asp	Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys
			500					505					510		
His	His	Gly	Gly	Ser	Arg	Ser	Gly	His	Gly	Arg	His	Arg	Arg		
		515					520					525	526		

<211> 1084

<212> PRT

<213> Homo sapiens

<400> 1196

```

Met Pro Thr Asn Phe Thr Val Val Pro Val Glu Ala His Ala Asp Gly
 1          5          10          15
Gly Gly Asp Glu Thr Ala Glu Arg Thr Glu Ala Pro Gly Thr Pro Glu
          20          25          30
Gly Pro Glu Pro Glu Arg Pro Ser Pro Gly Asp Gly Asn Pro Arg Glu
          35          40          45
Asn Ser Pro Phe Leu Asn Asn Val Glu Val Glu Gln Glu Ser Phe Phe
 50          55          60
Glu Gly Lys Asn Met Ala Leu Phe Glu Glu Glu Met Asp Ser Asn Pro
 65          70          75          80
Met Val Ser Ser Leu Leu Asn Lys Leu Ala Asn Tyr Thr Asn Leu Ser
          85          90          95
Gln Gly Val Val Glu His Glu Glu Asp Glu Glu Ser Arg Arg Arg Glu
          100          105          110
Ala Lys Ala Pro Arg Met Gly Thr Phe Ile Gly Val Tyr Leu Pro Cys
          115          120          125
Leu Gln Asn Ile Leu Gly Val Ile Leu Phe Leu Arg Leu Thr Trp Ile
          130          135          140
Val Gly Val Ala Gly Val Leu Glu Ser Phe Leu Ile Val Ala Met Cys
          145          150          155          160
Cys Thr Cys Thr Met Leu Thr Ala Ile Ser Met Ser Ala Ile Ala Thr
          165          170          175
Asn Gly Val Val Pro Ala Gly Gly Ser Tyr Tyr Met Ile Ser Arg Ser
          180          185          190
Leu Gly Pro Glu Phe Gly Gly Ala Val Gly Leu Cys Phe Tyr Leu Gly
          195          200          205
Thr Thr Phe Ala Gly Ala Met Tyr Ile Leu Gly Thr Ile Glu Ile Phe
          210          215          220
Leu Thr Tyr Ile Ser Pro Gly Ala Ala Ile Phe Gln Ala Glu Ala Ala
          225          230          235          240
Gly Gly Glu Ala Ala Ala Met Leu His Asn Met Arg Val Tyr Gly Thr
          245          250          255
Cys Thr Leu Val Leu Met Ala Leu Val Val Phe Val Gly Val Lys Tyr
          260          265          270
Val Asn Lys Leu Ala Leu Val Phe Leu Ala Cys Val Val Leu Ser Ile
          275          280          285
Leu Ala Ile Tyr Ala Gly Val Ile Lys Ser Ala Phe Asp Pro Pro Asp
          290          295          300
Ile Pro Val Cys Leu Leu Gly Asn Arg Thr Leu Ser Arg Arg Ser Phe
          305          310          315          320
Asp Ala Cys Val Lys Ala Tyr Gly Ile His Asn Asn Ser Ala Thr Ser
          325          330          335
Ala Leu Trp Gly Leu Phe Cys Asn Gly Ser Gln Pro Ser Ala Ala Cys
          340          345          350
Asp Glu Tyr Phe Ile Gln Asn Asn Val Thr Glu Ile Gln Gly Ile Pro
          355          360          365
Gly Ala Ala Ser Gly Val Phe Leu Glu Asn Leu Trp Ser Thr Tyr Ala
          370          375          380
His Ala Gly Ala Phe Val Glu Lys Lys Gly Val Pro Ser Val Pro Val
          385          390          395          400
Ala Glu Glu Ser Arg Ala Ser Thr Leu Pro Tyr Val Leu Thr Asp Ile
          405          410          415
Ala Ala Ser Phe Thr Leu Leu Val Gly Ile Tyr Phe Pro Ser Val Thr
          420          425          430
Gly Ile Met Ala Gly Ser Asn Arg Ser Gly Asp Leu Lys Asp Ala Gln
          435          440          445
Lys Ser Ile Pro Thr Gly Thr Ile Leu Ala Ile Val Thr Thr Ser Phe
          450          455          460

```

Ile	Tyr	Leu	Ser	Cys	Ile	Val	Leu	Phe	Gly	Ala	Cys	Ile	Glu	Gly	Val	465	470	475	480
Val	Leu	Arg	Asp	Lys	Phe	Gly	Glu	Ala	Leu	Gln	Gly	Asn	Leu	Val	Ile	485	490		495
Gly	Met	Leu	Ala	Trp	Pro	Ser	Pro	Trp	Val	Ile	Val	Ile	Gly	Ser	Phe	500	505		510
Phe	Ser	Thr	Cys	Gly	Ala	Gly	Leu	Gln	Thr	Leu	Thr	Gly	Ala	Pro	Arg	515	520		525
Leu	Leu	Gln	Ala	Ile	Ala	Arg	Asp	Gly	Ile	Val	Pro	Phe	Leu	Gln	Val	530	535		540
Phe	Gly	His	Gly	Lys	Ala	Asn	Gly	Glu	Pro	Thr	Trp	Ala	Leu	Leu	Leu	545	550		555
Thr	Val	Leu	Ile	Cys	Glu	Thr	Gly	Ile	Leu	Ile	Ala	Ser	Leu	Asp	Ser	565	570		575
Val	Ala	Pro	Ile	Leu	Ser	Met	Phe	Phe	Leu	Met	Cys	Tyr	Leu	Phe	Val	580	585		590
Asn	Leu	Ala	Cys	Ala	Val	Gln	Thr	Leu	Leu	Arg	Thr	Pro	Asn	Trp	Arg	595	600		605
Pro	Arg	Phe	Lys	Phe	Tyr	His	Trp	Thr	Leu	Ser	Phe	Leu	Gly	Met	Ser	610	615		620
Leu	Cys	Leu	Ala	Leu	Met	Phe	Ile	Cys	Ser	Trp	Tyr	Tyr	Ala	Leu	Ser	625	630		635
Ala	Met	Leu	Ile	Ala	Gly	Cys	Ile	Tyr	Lys	Tyr	Ile	Glu	Tyr	Arg	Gly	645	650		655
Ala	Glu	Lys	Glu	Trp	Gly	Asp	Gly	Ile	Arg	Gly	Leu	Ser	Leu	Asn	Ala	660	665		670
Ala	Arg	Tyr	Ala	Leu	Leu	Arg	Val	Glu	His	Gly	Pro	Pro	His	Thr	Lys	675	680		685
Asn	Trp	Arg	Pro	Gln	Val	Leu	Val	Met	Leu	Asn	Leu	Asp	Ala	Glu	Gln	690	695		700
Ala	Val	Lys	His	Pro	Arg	Leu	Leu	Ser	Phe	Thr	Ser	Gln	Leu	Lys	Ala	705	710		715
Gly	Lys	Gly	Leu	Thr	Ile	Val	Gly	Ser	Val	Leu	Glu	Gly	Thr	Tyr	Leu	725	730		735
Asp	Lys	His	Met	Glu	Ala	Gln	Arg	Ala	Glu	Glu	Asn	Ile	Arg	Ser	Leu	740	745		750
Met	Ser	Thr	Glu	Lys	Thr	Lys	Gly	Phe	Cys	Gln	Leu	Val	Val	Ser	Ser	755	760		765
Ser	Leu	Arg	Asp	Gly	Met	Ser	His	Leu	Ile	Gln	Ser	Ala	Gly	Leu	Gly	770	775		780
Gly	Leu	Lys	His	Asn	Thr	Val	Leu	Met	Ala	Trp	Pro	Ala	Ser	Trp	Lys	785	790		795
Gln	Glu	Asp	Asn	Pro	Phe	Ser	Trp	Lys	Asn	Phe	Val	Asp	Thr	Val	Arg	805	810		815
Asp	Thr	Thr	Ala	Ala	His	Gln	Ala	Leu	Leu	Val	Ala	Lys	Asn	Val	Asp	820	825		830
Ser	Phe	Pro	Gln	Asn	Gln	Glu	Arg	Phe	Gly	Gly	Gly	His	Ile	Asp	Val	835	840		845
Trp	Trp	Ile	Val	His	Asp	Gly	Gly	Met	Leu	Met	Leu	Leu	Pro	Phe	Leu	850	855		860
Leu	Arg	Gln	His	Lys	Val	Trp	Arg	Lys	Cys	Arg	Met	Arg	Ile	Phe	Thr	865	870		875
Val	Ala	Gln	Val	Asp	Asp	Asn	Ser	Ile	Gln	Met	Lys	Lys	Asp	Leu	Gln	885	890		895
Met	Phe	Leu	Tyr	His	Leu	Arg	Ile	Ser	Ala	Glu	Val	Glu	Val	Val	Glu	900	905		910
Met	Val	Glu	Asn	Asp	Ile	Ser	Ala	Phe	Thr	Tyr	Glu	Arg	Thr	Leu	Met	915	920		925
Met	Glu	Gln	Arg	Ser	Gln	Met	Leu	Lys	Gln	Met	Gln	Leu	Ser	Lys	Asn	930	935		940
Glu	Gln	Glu	Arg	Glu	Ala	Gln	Leu	Ile	His	Asp	Arg	Asn	Thr	Ala	Ser	945	950		955
His	Thr	Ala	Ala	Ala	Ala	Arg	Thr	Gln	Ala	Pro	Pro	Thr	Pro	Asp	Lys	965	970		975

Val Gln Met Thr Trp Thr Arg Glu Lys Leu Ile Ala Glu Lys Tyr Arg
 980 985 990
 Ser Arg Asp Thr Ser Leu Ser Gly Phe Lys Asp Leu Phe Ser Met Lys
 995 1000 1005
 Pro Asp Gln Ser Asn Val Arg Arg Met His Thr Ala Val Lys Leu Asn
 1010 1015 1020
 Gly Val Val Leu Asn Lys Ser Gln Asp Ala Gln Leu Val Leu Leu Asn
 1025 1030 1035 1040
 Met Pro Gly Pro Pro Lys Asn Arg Gln Gly Asp Glu Asn Tyr Met Glu
 1045 1050 1055
 Phe Leu Glu Val Leu Thr Glu Gly Leu Asn Arg Val Leu Leu Val Arg
 1060 1065 1070
 Gly Gly Gly Arg Glu Val Ile Thr Ile Tyr Ser *
 1075 1080 1083

<210> 1197

<211> 908

<212> PRT

<213> Homo sapiens

<400> 1197

Met Thr Ser His Ala Arg Val Arg Lys Leu Gly Ser Ser Arg Ala Ala
 1 5 10 15
 Ala Glu Pro Gly Ala Gly Pro Ala Arg Glu Pro Ala Arg Leu Cys Gly
 20 25 30
 Tyr Leu Gln Lys Leu Ser Gly Lys Gly Pro Leu Arg Gly Tyr Arg Ser
 35 40 45
 Arg Trp Phe Val Phe Asp Ala Arg Arg Cys Tyr Leu Tyr Tyr Phe Lys
 50 55 60
 Ser Pro Gln Asp Ala Leu Pro Leu Gly His Leu Asp Ile Ala Asp Ala
 65 70 75 80
 Cys Phe Ser Tyr Gln Gly Pro Asp Glu Ala Ala Glu Pro Gly Thr Glu
 85 90 95
 Pro Pro Ala His Phe Gln Val His Ser Ala Gly Ala Val Thr Val Leu
 100 105 110
 Lys Ala Pro Asn Arg Gln Leu Met Thr Tyr Trp Leu Gln Glu Leu Gln
 115 120 125
 Gln Lys Arg Trp Glu Tyr Cys Asn Ser Leu Asp Met Val Lys Trp Asp
 130 135 140
 Ser Arg Thr Ser Pro Thr Pro Gly Asp Phe Pro Lys Gly Leu Val Ala
 145 150 155 160
 Arg Asp Asn Thr Asp Leu Ile Tyr Pro His Pro Asn Ala Ser Ala Glu
 165 170 175
 Lys Ala Arg Asn Val Leu Ala Val Glu Thr Val Pro Gly Glu Leu Val
 180 185 190
 Gly Glu Gln Ala Ala Asn Gln Pro Ala Pro Gly His Pro Asn Ser Ile
 195 200 205
 Asn Phe Tyr Ser Leu Lys Gln Trp Gly Asn Glu Leu Lys Asn Ser Met
 210 215 220
 Ser Ser Phe Arg Pro Gly Arg Gly His Asn Asp Ser Arg Arg Thr Val
 225 230 235 240
 Phe Tyr Thr Asn Glu Glu Trp Glu Leu Leu Asp Pro Thr Pro Lys Asp
 245 250 255
 Leu Glu Glu Ser Ile Val Gln Glu Glu Lys Lys Lys Leu Thr Pro Glu
 260 265 270
 Gly Asn Lys Gly Val Thr Gly Ser Gly Phe Pro Phe Asp Phe Gly Arg
 275 280 285
 Asn Pro Tyr Lys Gly Lys Arg Pro Leu Lys Asp Ile Ile Gly Ser Tyr
 290 295 300
 Lys Asn Arg His Ser Ser Gly Asp Pro Ser Ser Glu Gly Thr Ser Gly
 305 310 315 320

Ser	Gly	Ser	Val	Ser	Ile	Arg	Lys	Pro	Ala	Ser	Glu	Met	Gln	Leu	Gln	
				325					330						335	
Val	Gln	Ser	Gln	Gln	Glu	Glu	Leu	Glu	Gln	Leu	Lys	Lys	Asp	Leu	Ser	
			340					345					350			
Ser	Gln	Lys	Glu	Leu	Val	Arg	Leu	Leu	Gln	Gln	Thr	Val	Arg	Ser	Ser	
		355					360					365				
Gln	Tyr	Asp	Lys	Tyr	Phe	Thr	Ser	Ser	Arg	Leu	Cys	Glu	Gly	Val	Pro	
	370					375					380					
Lys	Asp	Thr	Leu	Glu	Leu	Leu	His	Gln	Lys	Asp	Asp	Gln	Ile	Leu	Gly	
385					390					395					400	
Leu	Thr	Ser	Gln	Leu	Glu	Arg	Phe	Ser	Leu	Glu	Lys	Glu	Ser	Leu	Gln	
			405						410						415	
Gln	Glu	Val	Arg	Thr	Leu	Lys	Ser	Lys	Val	Gly	Glu	Leu	Asn	Glu	Gln	
		420						425					430			
Leu	Gly	Met	Leu	Met	Glu	Thr	Ile	Gln	Ala	Lys	Asp	Glu	Val	Ile	Ile	
	435					440						445				
Lys	Leu	Ser	Glu	Gly	Glu	Gly	Asn	Gly	Pro	Pro	Pro	Thr	Val	Ala	Pro	
	450					455					460					
Ser	Ser	Pro	Ser	Val	Val	Pro	Val	Ala	Arg	Asp	Gln	Leu	Glu	Leu	Asp	
465				470						475					480	
Arg	Leu	Lys	Asp	Asn	Leu	Gln	Gly	Tyr	Lys	Thr	Gln	Asn	Lys	Phe	Leu	
			485					490						495		
Asn	Lys	Glu	Ile	Leu	Glu	Leu	Ser	Ala	Leu	Arg	Arg	Asn	Ala	Glu	Arg	
		500						505					510			
Arg	Glu	Arg	Asp	Leu	Met	Ala	Lys	Tyr	Ser	Ser	Leu	Glu	Ala	Lys	Leu	
		515					520						525			
Cys	Gln	Ile	Glu	Ser	Lys	Tyr	Leu	Ile	Leu	Leu	Gln	Glu	Met	Lys	Thr	
	530					535					540					
Pro	Val	Cys	Ser	Glu	Asp	Gln	Gly	Pro	Thr	Arg	Glu	Val	Ile	Ala	Gln	
545					550					555					560	
Leu	Leu	Glu	Asp	Ala	Leu	Gln	Val	Glu	Ser	Gln	Glu	Gln	Pro	Glu	Gln	
			565					570						575		
Ala	Phe	Val	Lys	Pro	His	Leu	Val	Ser	Glu	Tyr	Asp	Ile	Tyr	Gly	Phe	
		580						585					590			
Arg	Thr	Val	Pro	Glu	Asp	Asp	Glu	Glu	Lys	Leu	Val	Ala	Lys	Val		
		595				600					605					
Arg	Ala	Leu	Asp	Leu	Lys	Thr	Leu	Tyr	Leu	Thr	Glu	Asn	Gln	Glu	Val	
	610					615					620					
Ser	Thr	Gly	Val	Lys	Trp	Glu	Asn	Tyr	Phe	Ala	Ser	Thr	Val	Asn	Arg	
625					630					635					640	
Glu	Met	Met	Cys	Ser	Pro	Glu	Leu	Lys	Asn	Leu	Ile	Arg	Ala	Gly	Ile	
			645						650					655		
Pro	His	Glu	His	Arg	Ser	Lys	Val	Trp	Lys	Trp	Cys	Val	Asp	Arg	His	
		660						665					670			
Thr	Arg	Lys	Phe	Lys	Asp	Asn	Thr	Glu	Pro	Gly	His	Phe	Gln	Thr	Leu	
		675					680					685				
Leu	Gln	Lys	Ala	Leu	Glu	Lys	Gln	Asn	Pro	Ala	Ser	Lys	Gln	Ile	Glu	
	690					695					700					
Leu	Asp	Leu	Leu	Arg	Thr	Leu	Pro	Asn	Asn	Lys	His	Tyr	Ser	Cys	Pro	
705					710					715					720	
Thr	Ser	Glu	Gly	Ile	Gln	Lys	Leu	Arg	Asn	Val	Leu	Leu	Ala	Phe	Ser	
			725						730					735		
Trp	Arg	Asn	Pro	Asp	Ile	Gly	Tyr	Cys	Gln	Gly	Leu	Asn	Arg	Leu	Val	
		740						745					750			
Ala	Val	Ala	Leu	Leu	Tyr	Leu	Glu	Gln	Glu	Asp	Ala	Phe	Trp	Cys	Leu	
		755					760					765				
Val	Thr	Ile	Val	Glu	Val	Phe	Met	Pro	Arg	Asp	Tyr	Tyr	Thr	Lys	Thr	
	770					775					780					
Leu	Leu	Gly	Ser	Gln	Val	Asp	Gln	Arg	Val	Phe	Arg	Asp	Leu	Met	Ser	
785					790					795					800	
Glu	Lys	Leu	Pro	Arg	Leu	His	Gly	His	Phe	Glu	Gln	Tyr	Lys	Val	Asp	
			805						810					815		
Tyr	Thr	Leu	Ile	Thr	Phe	Asn	Trp	Phe	Leu	Val	Val	Phe	Val	Asp	Ser	
			820					825						830		

Val Val Ser Asp Ile Leu Phe Lys Ile Trp Asp Ser Phe Leu Tyr Glu
 835 840 845
 Gly Pro Lys Val Ile Phe Arg Phe Ala Leu Ala Leu Phe Lys Tyr Lys
 850 855 860
 Glu Glu Glu Ile Leu Lys Leu Gln Asp Ser Met Ser Ile Phe Lys Tyr
 865 870 875 880
 Leu Arg Tyr Phe Thr Arg Thr Ile Leu Asp Ala Arg Ser Gly Thr Asp
 885 890 895
 Ala Pro Thr Thr Trp Arg Lys Ser Gly Trp Ser *
 900 905 907

<210> 1198

<211> 1368

<212> PRT

<213> Homo sapiens

<400> 1198

Met Arg Gln Lys Phe Ala Met Ala Leu Ala Ser Pro Phe Gly Leu Val
 1 5 10 15
 Glu Thr Trp Arg Arg Pro Asn Ser Gln Leu Tyr Arg Ala Ser Ala Leu
 20 25 30
 Phe Glu Thr Ile Arg His Glu Ala Gln Leu Ser Thr Asp Tyr Lys Leu
 35 40 45
 Ser Leu Phe Asp Leu Gln Thr Ser Ser Tyr Gln Ala Leu Gln Arg Val
 50 55 60
 Leu Val Ser Leu Gly His His Asp Glu Ala Leu Ala Val Ala Glu Arg
 65 70 75 80
 Gly Arg Thr Arg Ala Phe Ala Asp Leu Leu Val Glu Arg Gln Thr Gly
 85 90 95
 Gln Gln Asp Ser Asp Pro Tyr Ser Pro Val Thr Ile Asp Gln Ile Leu
 100 105 110
 Glu Met Val Asn Gly Gln Arg Gly Leu Val Leu Tyr Tyr Ser Leu Ala
 115 120 125
 Ala Gly Tyr Leu Tyr Ser Trp Leu Leu Ala Pro Gly Ala Gly Ile Val
 130 135 140
 Lys Phe His Glu His Tyr Leu Gly Glu Asn Thr Val Glu Asn Ser Ser
 145 150 155 160
 Asp Phe Gln Ala Ser Ser Ser Val Thr Leu Pro Thr Ala Thr Gly Ser
 165 170 175
 Ala Leu Glu Gln His Ile Ala Ser Val Arg Glu Ala Leu Gly Val Glu
 180 185 190
 Ser His Tyr Ser Arg Ala Cys Ala Ser Ser Glu Thr Glu Ser Glu Ala
 195 200 205
 Gly Asp Ile Met Asp Gln Gln Phe Glu Glu Met Asn Asn Lys Leu Asn
 210 215 220
 Ser Val Thr Asp Pro Thr Gly Phe Leu Arg Met Val Arg Arg Asn Asn
 225 230 235 240
 Leu Phe Asn Arg Ser Cys Gln Ser Met Thr Ser Leu Phe Ser Asn Thr
 245 250 255
 Val Ser Pro Thr Gln Asp Gly Thr Ser Ser Leu Pro Arg Arg Gln Ser
 260 265 270
 Ser Phe Ala Lys Pro Pro Leu Arg Ala Leu Tyr Asp Leu Leu Ile Ala
 275 280 285
 Pro Met Glu Gly Gly Leu Met His Ser Ser Gly Pro Val Gly Arg His
 290 295 300
 Arg Gln Leu Ile Leu Val Leu Glu Gly Glu Leu Tyr Leu Ile Pro Phe
 305 310 315 320
 Ala Leu Leu Lys Gly Ser Ser Ser Asn Glu Tyr Leu Tyr Glu Arg Phe
 325 330 335
 Gly Leu Leu Ala Val Pro Ser Ile Arg Ser Leu Ser Val Gln Ser Lys
 340 345 350

Ser	His	Leu	Arg	Lys	Asn	Pro	Pro	Thr	Tyr	Ser	Ser	Ser	Thr	Ser	Met
		355					360					365			
Ala	Ala	Val	Ile	Gly	Asn	Pro	Lys	Leu	Pro	Ser	Ala	Val	Met	Asp	Arg
		370					375				380				
Trp	Leu	Trp	Gly	Pro	Met	Pro	Ser	Ala	Glu	Glu	Glu	Ala	Tyr	Met	Val
		385				390				395					400
Ser	Glu	Leu	Leu	Gly	Cys	Gln	Pro	Leu	Val	Gly	Ser	Val	Ala	Thr	Lys
				405					410					415	
Glu	Arg	Val	Met	Ser	Ala	Leu	Thr	Gln	Ala	Glu	Cys	Val	His	Phe	Ala
			420					425					430		
Thr	His	Ile	Ser	Trp	Lys	Leu	Ser	Ala	Leu	Val	Leu	Thr	Pro	Ser	Met
		435					440					445			
Asp	Gly	Asn	Pro	Ala	Ser	Ser	Lys	Ser	Ser	Phe	Gly	His	Pro	Tyr	Thr
		450					455				460				
Ile	Pro	Glu	Ser	Leu	Arg	Val	Gln	Asp	Asp	Ala	Ser	Asp	Gly	Glu	Ser
		465				470				475					480
Ile	Ser	Asp	Cys	Pro	Pro	Leu	Gln	Glu	Leu	Leu	Leu	Thr	Ala	Ala	Asp
				485					490					495	
Val	Leu	Asp	Leu	Gln	Leu	Pro	Val	Lys	Leu	Val	Val	Leu	Gly	Ser	Ser
			500					505					510		
Gln	Glu	Ser	Asn	Ser	Lys	Val	Ala	Ala	Asp	Gly	Val	Ile	Ala	Leu	Thr
		515					520					525			
Arg	Ala	Phe	Leu	Ala	Ala	Gly	Ala	Gln	Cys	Val	Leu	Val	Ser	Leu	Trp
		530				535					540				
Pro	Val	Pro	Val	Ala	Ala	Phe	Lys	Met	Phe	Ile	His	Ala	Phe	Tyr	Ser
		545				550				555					560
Ser	Leu	Leu	Asn	Gly	Leu	Lys	Ala	Ser	Ala	Ala	Leu	Gly	Glu	Ala	Met
				565					570					575	
Lys	Val	Val	Gln	Ser	Ser	Lys	Ala	Phe	Ser	His	Pro	Ser	Asn	Trp	Ala
			580					585					590		
Gly	Phe	Met	Leu	Ile	Gly	Ser	Asp	Val	Lys	Leu	Asn	Ser	Pro	Ser	Ser
		595					600					605			
Leu	Ile	Gly	Gln	Ala	Leu	Thr	Glu	Ile	Leu	Gln	His	Pro	Glu	Arg	Ala
		610				615					620				
Arg	Asp	Ala	Leu	Arg	Val	Leu	Leu	His	Leu	Val	Glu	Lys	Ser	Leu	Gln
		625				630				635					640
Arg	Ile	Gln	Asn	Gly	Gln	Arg	Asn	Ala	Met	Tyr	Thr	Ser	Gln	Gln	Ser
				645					650					655	
Val	Glu	Asn	Lys	Val	Gly	Gly	Ile	Pro	Gly	Trp	Gln	Ala	Leu	Leu	Thr
			660					665					670		
Ala	Val	Gly	Phe	Arg	Leu	Asp	Pro	Pro	Thr	Ser	Gly	Leu	Pro	Ala	Ala
		675					680					685			
Val	Phe	Phe	Pro	Thr	Ser	Asp	Pro	Gly	Asp	Arg	Leu	Gln	Gln	Cys	Ser
		690				695					700				
Ser	Thr	Leu	Gln	Ser	Leu	Leu	Gly	Leu	Pro	Asn	Pro	Ala	Leu	Gln	Ala
		705				710				715				720	
Leu	Cys	Lys	Leu	Ile	Thr	Ala	Ser	Glu	Thr	Gly	Glu	Gln	Leu	Ile	Ser
				725					730					735	
Arg	Ala	Val	Lys	Asn	Met	Val	Gly	Met	Leu	His	Gln	Val	Leu	Val	Gln
			740					745					750		
Leu	Gln	Ala	Gly	Glu	Lys	Glu	Gln	Asp	Leu	Ala	Ser	Ala	Pro	Ile	Gln
		755					760					765			
Val	Ser	Ile	Ser	Val	Gln	Leu	Trp	Arg	Leu	Pro	Gly	Cys	His	Glu	Phe
		770				775					780				
Leu	Ala	Ala	Leu	Gly	Phe	Asp	Leu	Cys	Glu	Val	Gly	Gln	Glu	Glu	Val
		785				790				795					800
Ile	Leu	Lys	Thr	Gly	Lys	Gln	Ala	Asn	Arg	Arg	Thr	Val	His	Phe	Ala
				805					810					815	
Leu	Gln	Ser	Leu	Leu	Ser	Leu	Phe	Asp	Ser	Thr	Glu	Leu	Pro	Lys	Arg
			820					825					830		
Leu	Ser	Leu	Asp	Ser	Ser	Ser	Ser	Leu	Glu	Ser	Leu	Ala	Ser	Ala	Gln
		835						840				845			
Ser	Val	Ser	Asn	Ala	Leu	Pro	Gly	Tyr	Gln	Gln	Pro	Pro	Phe	Ser	
		850				855					860				

Pro Thr Gly Ala Asp Ser Ile Ala Ser Asp Ala Ile Ser Val Tyr Ser
 865 870 875 880
 Leu Ser Ser Ile Ala Ser Ser Met Ser Phe Val Ser Lys Pro Glu Gly
 885 890 895
 Gly Ser Glu Gly Gly Gly Pro Gly Gly Arg Gln Asp His Asp Arg Ser
 900 905 910
 Lys Asn Ala Tyr Leu Gln Arg Ser Thr Leu Pro Arg Ser Gln Leu Pro
 915 920 925
 Pro Gln Thr Arg Pro Ala Gly Asn Lys Asp Glu Glu Glu Tyr Glu Gly
 930 935 940
 Phe Ser Ile Ile Ser Asn Glu Pro Leu Ala Thr Tyr Gln Glu Asn Arg
 945 950 955 960
 Asn Thr Cys Phe Ser Pro Asp His Lys Gln Pro Gln Pro Gly Thr Ala
 965 970 975
 Gly Gly Met Arg Val Ser Val Ser Ser Lys Gly Ser Ile Ser Thr Pro
 980 985 990
 Asn Ser Pro Val Lys Met Thr Leu Ile Pro Ser Pro Asn Ser Pro Phe
 995 1000 1005
 Gln Lys Val Gly Lys Leu Ala Ser Ser Asp Thr Gly Glu Ser Asp Gln
 1010 1015 1020
 Ser Ser Thr Glu Thr Asp Ser Thr Val Lys Ser Gln Glu Glu Ser Asn
 1025 1030 1035 1040
 Pro Lys Leu Asp Pro Gln Glu Leu Ala Gln Lys Ile Leu Glu Glu Thr
 1045 1050 1055
 Gln Ser His Leu Ile Ala Val Glu Arg Leu Gln Arg Ser Gly Gly Gln
 1060 1065 1070
 Val Ser Lys Ser Asn Asn Pro Glu Asp Gly Val Gln Ala Pro Ser Ser
 1075 1080 1085
 Thr Ala Val Phe Arg Ala Ser Glu Thr Ser Ala Phe Ser Arg Pro Val
 1090 1095 1100
 Leu Ser His Gln Lys Ser Gln Pro Ser Pro Val Thr Val Lys Pro Lys
 1105 1110 1115 1120
 Pro Pro Ala Arg Ser Ser Ser Leu Pro Lys Val Ser Ser Gly Tyr Ser
 1125 1130 1135
 Ser Pro Thr Thr Ser Glu Met Ser Ile Lys Asp Ser Pro Ser Gln His
 1140 1145 1150
 Ser Gly Arg Pro Ser Pro Gly Cys Asp Ser Gln Thr Ser Gln Leu Asp
 1155 1160 1165
 Gln Pro Leu Phe Lys Leu Lys Tyr Pro Ser Ser Pro Tyr Ser Ala His
 1170 1175 1180
 Ile Ser Lys Ser Pro Arg Asn Met Ser Pro Ser Ser Gly His Gln Ser
 1185 1190 1195 1200
 Pro Ala Gly Ser Ala Pro Ser Pro Ala Leu Ser Tyr Ser Ser Ala Gly
 1205 1210 1215
 Ser Ala Arg Ser Ser Pro Ala Asp Ala Pro Asp Ile Asp Lys Leu Lys
 1220 1225 1230
 Met Ala Ala Ile Asp Glu Lys Val Gln Ala Val His Asn Leu Lys Met
 1235 1240 1245
 Phe Trp Gln Ser Thr Pro Gln His Ser Thr Gly Pro Met Lys Ile Phe
 1250 1255 1260
 Arg Gly Ala Pro Gly Thr Met Thr Ser Lys Arg Asp Val Leu Ser Leu
 1265 1270 1275 1280
 Leu Asn Leu Ser Pro Arg His Asn Lys Lys Glu Glu Gly Val Asp Lys
 1285 1290 1295
 Leu Glu Leu Lys Glu Leu Ser Leu Gln His Asp Gly Ala Pro Pro
 1300 1305 1310
 Lys Ala Pro Pro Asn Gly His Trp Arg Thr Glu Thr Thr Ser Leu Gly
 1315 1320 1325
 Ser Leu Pro Leu Pro Ala Gly Pro Pro Ala Thr Ala Pro Ala Arg Pro
 1330 1335 1340
 Leu Arg Leu Pro Ser Gly Asn Gly Tyr Lys Phe Leu Ser Pro Gly Arg
 1345 1350 1355 1360
 Phe Phe Pro Ser Ser Lys Cys *
 1365 1367

<210> 1199
 <211> 242
 <212> PRT
 <213> Homo sapiens

<400> 1199
 Met Met Met Asp Leu Phe Glu Thr Gly Ser Tyr Phe Phe Tyr Leu Asp
 1 5 10 15
 Gly Glu Asn Val Thr Leu Gln Pro Leu Glu Val Ala Glu Gly Ser Pro
 20 25 30
 Leu Tyr Pro Gly Ser Asp Gly Thr Leu Ser Pro Cys Gln Asp Gln Met
 35 40 45
 Pro Pro Glu Ala Gly Ser Asp Ser Ser Gly Glu Glu His Val Leu Ala
 50 55 60
 Pro Pro Gly Leu Gln Pro Pro His Cys Pro Gly Gln Cys Leu Ile Trp
 65 70 75 80
 Ala Cys Lys Thr Cys Lys Arg Lys Ser Ala Pro Thr Asp Arg Arg Lys
 85 90 95
 Ala Ala Thr Leu Arg Glu Arg Arg Arg Leu Lys Lys Ile Asn Glu Ala
 100 105 110
 Phe Glu Ala Leu Lys Arg Arg Thr Val Ala Asn Pro Asn Gln Arg Leu
 115 120 125
 Pro Lys Val Glu Ile Leu Arg Ser Ala Ile Ser Tyr Ile Glu Arg Leu
 130 135 140
 Gln Asp Leu Leu His Arg Leu Asp Gln Gln Glu Lys Met Gln Glu Leu
 145 150 155 160
 Gly Val Asp Pro Phe Ser Tyr Arg Pro Lys Gln Glu Asn Leu Glu Gly
 165 170 175
 Ala Asp Phe Leu Arg Thr Cys Ser Ser Gln Trp Pro Ser Val Ser Asp
 180 185 190
 His Ser Arg Gly Leu Val Ile Thr Ala Lys Glu Gly Gly Ala Ser Ile
 195 200 205
 Asp Ser Ser Ala Ser Ser Ser Leu Arg Cys Leu Ser Ser Ile Val Asp
 210 215 220
 Ser Ile Ser Ser Glu Glu Arg Lys Leu Pro Cys Val Glu Glu Val Val
 225 230 235 240
 Glu Lys
 242

<210> 1200
 <211> 145
 <212> PRT
 <213> Homo sapiens

<400> 1200
 Met Lys Phe Asn Pro Phe Val Thr Ser Asp Arg Ser Lys Asn Arg Lys
 1 5 10 15
 Arg His Phe Asn Ala Pro Ser His Val Arg Arg Lys Ile Met Ser Ser
 20 25 30
 Pro Leu Ser Lys Glu Leu Arg Gln Lys Tyr Asn Val Arg Ser Met Pro
 35 40 45
 Ile Arg Lys Asp Asp Glu Val Gln Val Val Arg Gly His Tyr Lys Gly
 50 55 60
 Gln Gln Ile Gly Lys Val Val Gln Val Tyr Arg Lys Lys Tyr Val Ile
 65 70 75 80
 Tyr Ile Glu Arg Val Gln Arg Glu Lys Ala Asn Gly Thr Thr Val His
 85 90 95

Val Gly Ile His Pro Ser Lys Val Val Ile Thr Arg Leu Lys Leu Asp
 100 105 110
 Lys Asp Arg Lys Lys Ile Leu Glu Arg Lys Ala Lys Ser Arg Gln Val
 115 120 125
 Gly Lys Glu Lys Gly Lys Tyr Lys Glu Glu Leu Ile Glu Lys Met Gln
 130 135 140
 Glu
 145

<210> 1201
 <211> 977
 <212> PRT
 <213> Homo sapiens

<400> 1201
 Met Asp Ile Tyr Asp Thr Gln Thr Leu Gly Val Val Val Phe Gly Gly
 1 5 10 15
 Phe Met Val Val Ser Ala Ile Gly Ile Phe Leu Val Ser Thr Phe Ser
 20 25 30
 Met Lys Glu Thr Ser Tyr Glu Glu Ala Leu Ala Asn Gln Arg Lys Glu
 35 40 45
 Met Ala Lys Thr His His Gln Lys Val Glu Lys Lys Lys Lys Glu Lys
 50 55 60
 Thr Val Glu Lys Lys Gly Lys Thr Lys Lys Lys Glu Glu Lys Pro Asn
 65 70 75 80
 Gly Lys Ile Pro Asp His Asp Pro Ala Pro Asn Val Thr Val Leu Leu
 85 90 95
 Arg Glu Pro Val Arg Ala Pro Ala Val Ala Val Ala Pro Thr Pro Val
 100 105 110
 Gln Pro Pro Ile Ile Val Ala Pro Val Ala Thr Val Pro Ala Met Pro
 115 120 125
 Gln Glu Lys Lys Leu Ala Ser Ser Pro Lys Asp Lys Lys Lys Lys Glu Lys
 130 135 140
 Lys Val Ala Lys Val Glu Pro Ala Val Ser Ser Val Val Asn Ser Ile
 145 150 155 160
 Gln Val Leu Thr Ser Lys Ala Ala Ile Leu Glu Thr Ala Pro Lys Glu
 165 170 175
 Gly Arg Asn Thr Asp Val Ala Gln Ser Pro Glu Ala Pro Lys Gln Glu
 180 185 190
 Ala Pro Ala Lys Lys Lys Ser Gly Ser Lys Lys Lys Gly Pro Pro Asp
 195 200 205
 Ala Asp Gly Pro Leu Tyr Leu Pro Tyr Lys Thr Leu Val Ser Thr Val
 210 215 220
 Gly Ser Met Val Phe Asn Glu Gly Glu Ala Gln Arg Leu Ile Glu Ile
 225 230 235 240
 Leu Ser Glu Lys Ala Gly Ile Ile Gln Asp Thr Trp His Lys Ala Thr
 245 250 255
 Gln Lys Gly Asp Pro Val Ala Ile Leu Lys Arg Gln Leu Glu Glu Lys
 260 265 270
 Glu Lys Leu Leu Ala Thr Glu Gln Glu Asp Ala Ala Val Ala Lys Ser
 275 280 285
 Lys Leu Arg Glu Leu Asn Lys Glu Met Ala Ala Glu Lys Ala Lys Ala
 290 295 300
 Ala Ala Gly Glu Ala Lys Val Lys Lys Gln Leu Val Ala Arg Glu Gln
 305 310 315 320
 Glu Ile Thr Ala Val Gln Ala Arg Met Gln Ala Ser Tyr Arg Glu His
 325 330 335
 Val Lys Glu Val Gln Gln Leu Gln Gly Lys Ile Arg Thr Leu Gln Glu
 340 345 350
 Gln Leu Glu Asn Gly Pro Asn Thr Gln Leu Ala Arg Leu Gln Gln Glu
 355 360 365

Asn	Ser	Ile	Leu	Arg	Asp	Ala	Leu	Asn	Gln	Ala	Thr	Ser	Gln	Val	Glu
370						375					380				
Ser	Lys	Gln	Asn	Ala	Glu	Leu	Ala	Lys	Leu	Arg	Gln	Glu	Leu	Ser	Lys
385					390					395					400
Val	Ser	Lys	Glu	Leu	Val	Glu	Lys	Ser	Glu	Ala	Val	Arg	Gln	Asp	Glu
				405					410					415	
Gln	Gln	Arg	Lys	Ala	Leu	Glu	Ala	Lys	Ala	Ala	Ala	Phe	Glu	Lys	Gln
			420					425					430		
Val	Leu	Gln	Leu	Gln	Ala	Ser	His	Arg	Glu	Ser	Glu	Glu	Ala	Leu	Gln
			435				440					445			
Lys	Arg	Leu	Asp	Glu	Val	Ser	Arg	Glu	Leu	Cys	His	Thr	Gln	Ser	Ser
450						455					460				
His	Ala	Ser	Leu	Arg	Ala	Asp	Ala	Glu	Lys	Ala	Gln	Glu	Gln	Gln	Gln
465					470					475					480
Gln	Met	Ala	Glu	Leu	His	Ser	Lys	Leu	Gln	Ser	Ser	Glu	Ala	Glu	Val
			485						490					495	
Arg	Ser	Lys	Cys	Glu	Glu	Leu	Ser	Gly	Leu	His	Gly	Gln	Leu	Gln	Glu
			500					505					510		
Ala	Arg	Ala	Glu	Asn	Ser	Gln	Leu	Thr	Glu	Arg	Ile	Arg	Ser	Ile	Glu
			515				520					525			
Ala	Leu	Glu	Glu	Ala	Gly	Gln	Ala	Arg	Asp	Ala	Gln	Asp	Val	Gln	Ala
530						535						540			
Ser	Gln	Ala	Glu	Ala	Asp	Gln	Gln	Gln	Thr	Arg	Leu	Lys	Glu	Leu	Glu
545					550					555					560
Ser	Gln	Val	Ser	Gly	Leu	Glu	Lys	Glu	Ala	Ile	Glu	Leu	Arg	Glu	Ala
				565					570					575	
Val	Glu	Gln	Gln	Lys	Val	Lys	Asn	Asn	Asp	Leu	Arg	Glu	Lys	Asn	Trp
			580					585						590	
Lys	Ala	Met	Glu	Ala	Leu	Ala	Thr	Ala	Glu	Gln	Ala	Cys	Lys	Glu	Lys
			595				600					605			
Leu	His	Ser	Leu	Thr	Gln	Ala	Lys	Glu	Glu	Ser	Glu	Lys	Gln	Leu	Cys
610						615					620				
Leu	Ile	Glu	Ala	Gln	Thr	Met	Glu	Ala	Leu	Leu	Ala	Leu	Leu	Pro	Glu
625					630						635				640
Leu	Ser	Val	Leu	Ala	Gln	Gln	Asn	Tyr	Thr	Glu	Trp	Leu	Gln	Asp	Leu
				645					650					655	
Lys	Glu	Lys	Gly	Pro	Thr	Leu	Leu	Lys	His	Pro	Pro	Ala	Pro	Ala	Glu
			660					665					670		
Pro	Ser	Ser	Asp	Leu	Ala	Ser	Lys	Leu	Arg	Glu	Ala	Glu	Glu	Thr	Gln
			675				680					685			
Ser	Thr	Leu	Gln	Ala	Glu	Cys	Asp	Gln	Tyr	Arg	Ser	Ile	Leu	Ala	Glu
690						695					700				
Thr	Glu	Gly	Met	Leu	Arg	Asp	Leu	Gln	Lys	Ser	Val	Glu	Glu	Glu	Glu
705					710						715				720
Gln	Val	Trp	Arg	Ala	Lys	Val	Gly	Ala	Ala	Glu	Glu	Glu	Leu	Gln	Lys
				725					730					735	
Ser	Arg	Val	Thr	Val	Lys	His	Leu	Glu	Ile	Val	Glu	Lys	Leu	Lys	
				740				745				750			
Gly	Glu	Leu	Glu	Ser	Ser	Asp	Gln	Val	Arg	Glu	His	Thr	Ser	His	Leu
			755				760					765			
Glu	Ala	Glu	Leu	Glu	Lys	His	Met	Ala	Ala	Ala	Ser	Ala	Glu	Cys	Gln
770						775					780				
Asn	Tyr	Ala	Lys	Glu	Val	Ala	Gly	Leu	Arg	Gln	Leu	Leu	Leu	Glu	Ser
785					790					795					800
Gln	Ser	Gln	Leu	Asp	Ala	Ala	Lys	Ser	Glu	Ala	Gln	Lys	Gln	Ser	Asp
				805					810					815	
Glu	Leu	Ala	Leu	Val	Arg	Gln	Gln	Leu	Ser	Glu	Met	Lys	Ser	His	Val
			820					825				830			
Glu	Asp	Gly	Asp	Ile	Ala	Gly	Ala	Pro	Ala	Ser	Ser	Pro	Glu	Ala	Pro
			835				840					845			
Pro	Ala	Glu	Gln	Asp	Pro	Val	Gln	Leu	Lys	Thr	Gln	Leu	Glu	Trp	Thr
			850				855					860			
Glu	Ala	Ile	Leu	Glu	Asp	Glu	Gln	Thr	Gln	Arg	Gln	Lys	Leu	Thr	Ala
865					870					875					880

```
<210> 1202
<211> 881
<212> PRT
<213> Homo sapiens
```

2969

Leu Asp Trp Ala Cys Ser Met Ala Glu Ile Leu Arg Ser Leu Asn Ser
 325 330 335
 Ala Pro Leu Trp Arg Asp Val Ile Ala Thr Phe Thr Asp His Cys Ile
 340 345 350
 Lys Gln Leu Pro Phe Gln Leu Lys His Thr Asn Ile Phe Thr Leu Leu
 355 360 365
 Val Leu Val Gly Phe Pro Gln Val Leu Cys Val Gly Thr Arg Cys Val
 370 375 380
 Tyr Met Asp Asn Ala Asn Glu Pro His Asn Val Ile Ile Leu Lys His
 385 390 395 400
 Phe Thr Glu Lys Asn Arg Ala Val Ile Val Asp Val Lys Thr Arg Lys
 405 410 415
 Arg Lys Thr Val Lys Asp Tyr Gln Leu Val Gln Lys Gly Gly Gly Gln
 420 425 430
 Glu Cys Gly Asp Ser Arg Ala Gln Leu Ser Gln Tyr Ser Gln His Phe
 435 440 445
 Ala Phe Ile Ala Ser His Leu Leu Gln Ser Ser Met Asp Ser His Cys
 450 455 460
 Pro Glu Ala Val Glu Ala Thr Trp Val Leu Ser Leu Ala Leu Lys Gly
 465 470 475 480
 Leu Tyr Lys Thr Leu Lys Ala His Gly Phe Glu Glu Ile Arg Ala Thr
 485 490 495
 Phe Leu Gln Thr Asp Leu Leu Lys Leu Leu Val Lys Lys Cys Ser Lys
 500 505 510
 Gly Thr Gly Phe Ser Lys Thr Trp Leu Leu Arg Asp Leu Glu Ile Leu
 515 520 525
 Ser Ile Met Leu Tyr Ser Ser Lys Lys Glu Ile Asn Ala Leu Ala Glu
 530 535 540
 His Gly Asp Leu Glu Leu Asp Glu Arg Gly Asp Arg Glu Glu Glu Val
 545 550 555 560
 Glu Arg Pro Val Ser Ser Pro Gly Asp Pro Glu Gln Lys Lys Leu Asp
 565 570 575
 Pro Leu Glu Gly Leu Asp Glu Pro Thr Arg Ile Cys Phe Leu Met Ala
 580 585 590
 His Asp Ala Leu Asn Ala Pro Leu His Ile Leu Arg Ala Ile Tyr Glu
 595 600 605
 Leu Gln Met Lys Lys Thr Asp Tyr Phe Phe Leu Glu Val Gln Lys Arg
 610 615 620
 Phe Asp Gly Asp Glu Leu Thr Thr Asp Glu Arg Ile Arg Ser Leu Ala
 625 630 635 640
 Gln Arg Trp Gln Pro Ser Lys Ser Leu Arg Leu Glu Glu Gln Ser Ala
 645 650 655
 Lys Ala Val Asp Thr Asp Met Ile Ile Leu Pro Cys Leu Ser Arg Pro
 660 665 670
 Ala Arg Cys Asp Gln Ala Thr Ala Glu Ser Asn Pro Val Thr Gln Lys
 675 680 685
 Leu Ile Ser Ser Thr Glu Ser Glu Leu Gln Gln Ser Tyr Ala Lys Gln
 690 695 700
 Arg Arg Ser Lys Ser Ala Ala Leu Leu His Lys Glu Leu Asn Cys Lys
 705 710 715 720
 Ser Lys Arg Ala Val Arg Asp Tyr Leu Phe Arg Val Asn Glu Ala Thr
 725 730 735
 Ala Val Leu Tyr Ala Arg His Val Leu Ala Ser Leu Leu Ala Glu Trp
 740 745 750
 Pro Ser His Val Pro Val Ser Glu Asp Ile Leu Glu Leu Ser Gly Pro
 755 760 765
 Ala His Met Thr Tyr Ile Leu Asp Met Phe Met Gln Leu Glu Glu Lys
 770 775 780
 His Glu Trp Glu Lys Val Val Met Gln Thr Glu Leu Val Leu Thr His
 785 790 795 800
 Gln Val Leu Pro Leu Pro His Arg Leu Pro Pro Val Ser Ala Ser Trp
 805 810 815
 Ser Glu Ala Thr Cys Val Ala Val Gln Leu Pro Asp Arg Cys Glu Cys
 820 825 830

Ser Lys Gly Arg Val Thr Val Ser Ser Pro Lys Asp Trp Ala Ser Glu
 835 840 845
 Glu Leu Arg Gly Pro Glu Arg Asp Phe Gln Leu Asn Gln Lys Ala Leu
 850 855 860
 Ser Pro Ser Ser Gln Phe Pro Ser Ala Glu Ile Leu Arg His Ile Arg
 865 870 875 880

*

<210> 1203
 <211> 154
 <212> PRT
 <213> Homo sapiens

<400> 1203
 Met Ala Gly Pro Val Lys Asp Arg Glu Ala Phe Gln Arg Leu Asn Phe
 1 5 10 15
 Leu Tyr Gln Ala Ala His Cys Val Leu Ala Gln Asp Pro Glu Asn Gln
 20 25 30
 Ala Leu Ala Arg Phe Tyr Cys Tyr Thr Glu Arg Thr Ile Ala Lys Arg
 35 40 45
 Leu Val Leu Arg Arg Asp Pro Ser Val Lys Arg Thr Leu Cys Arg Gly
 50 55 60
 Cys Ser Ser Leu Leu Val Pro Gly Leu Thr Cys Thr Gln Arg Gln Arg
 65 70 75 80
 Arg Cys Arg Gly Gln Arg Trp Thr Val Gln Thr Cys Leu Thr Cys Gln
 85 90 95
 Arg Ser Gln Arg Phe Leu Asn Asp Pro Gly His Leu Leu Trp Gly Asp
 100 105 110
 Arg Pro Glu Ala Gln Leu Gly Ser Gln Ala Asp Ser Lys Pro Leu Gln
 115 120 125
 Pro Leu Pro Asn Thr Ala His Ser Ile Ser Asp Arg Leu Pro Glu Glu
 130 135 140
 Lys Met Gln Thr Gln Gly Ser Ser Asn Gln
 145 150 154

<210> 1204
 <211> 109
 <212> PRT
 <213> Homo sapiens

<400> 1204
 Met Ser Gln Tyr Ala Pro Ser Pro Asp Phe Lys Arg Ala Leu Asp Ser
 1 5 10 15
 Ser Pro Glu Ala Asn Thr Glu Asp Asp Lys Thr Glu Glu Asp Val Pro
 20 25 30
 Met Pro Lys Asn Tyr Leu Trp Leu Thr Ile Val Ser Cys Phe Cys Pro
 35 40 45
 Ala Tyr Pro Ile Asn Ile Val Ala Leu Val Phe Ser Ile Met Ser Leu
 50 55 60
 Asn Ser Tyr Asn Asp Gly Asp Tyr Glu Gly Ala Arg Arg Leu Gly Arg
 65 70 75 80
 Asn Ala Lys Trp Val Ala Ile Ala Ser Ile Ile Ile Gly Leu Leu Ile
 85 90 95
 Ile Gly Ile Ser Cys Ala Val His Phe Thr Arg Asn Ala
 100 105 109

<210> 1205
 <211> 1359
 <212> PRT
 <213> Homo sapiens

<400> 1205
 Glu Gln Gly Pro Arg Arg Ala Gly Arg Ile Trp Gly Gly Ser Gly Gly
 1 5 10 15
 Cys Arg Arg Arg Ala Trp Thr Ser Arg Trp Leu Gln Arg Arg Arg Ser
 20 25 30
 Pro Glu Ser Cys Glu Ala Pro Leu Ser Ala Pro Leu Trp Gly Pro Gln
 35 40 45
 Arg Gly Leu Pro Gly Arg Glu Pro Leu Arg Ser Arg Ser Ala Ser Ala
 50 55 60
 Ile Ala Leu Arg Thr Ile Gly His Ile Leu Ala Leu Leu Leu Arg Leu
 65 70 75 80
 Leu His Leu Gly Leu Gly Ser Gly Gly Cys Arg Glu Asp Val Pro Pro
 85 90 95
 Ser Gly Arg Gly Lys Lys Glu Glu Lys Met Lys Lys His Arg Arg Ala
 100 105 110
 Leu Ala Leu Val Ser Cys Leu Phe Leu Cys Ser Leu Val Trp Leu Pro
 115 120 125
 Ser Trp Arg Val Cys Cys Lys Glu Ser Ser Ser Ala Ser Ala Ser Ser
 130 135 140
 Tyr Tyr Ser Gln Asp Asp Asn Cys Ala Leu Glu Asn Glu Asp Val Gln
 145 150 155 160
 Phe Gln Lys Lys Asp Glu Arg Glu Gly Pro Ile Asn Ala Glu Ser Leu
 165 170 175
 Gly Lys Ser Gly Ser Asn Leu Pro Ile Ser Pro Lys Glu His Lys Leu
 180 185 190
 Lys Asp Asp Ser Ile Val Asp Val Gln Asn Thr Glu Ser Lys Lys Leu
 195 200 205
 Ser Pro Pro Val Val Glu Thr Leu Pro Thr Val Asp Leu His Glu Glu
 210 215 220
 Ser Ser Asn Ala Val Val Asp Ser Glu Thr Val Glu Asn Ile Ser Ser
 225 230 235 240
 Ser Ser Thr Ser Glu Ile Thr Pro Ile Ser Lys Leu Asp Glu Ile Glu
 245 250 255
 Lys Ser Gly Thr Ile Pro Ile Ala Lys Pro Ser Glu Thr Glu Gln Ser
 260 265 270
 Glu Thr Asp Cys Asp Val Gly Glu Ala Leu Asp Ala Ser Ala Pro Ile
 275 280 285
 Glu Gln Pro Ser Phe Val Ser Pro Pro Asp Ser Leu Val Gly Gln His
 290 295 300
 Ile Glu Asn Val Ser Ser His Gly Lys Gly Lys Ile Thr Lys Ser
 305 310 315 320
 Glu Phe Glu Ser Lys Val Ser Ala Ser Glu Gln Gly Gly Gly Asp Pro
 325 330 335
 Lys Ser Ala Leu Asn Ala Ser Asp Asn Leu Lys Asn Glu Ser Ser Asp
 340 345 350
 Tyr Thr Lys Pro Gly Asp Ile Asp Pro Thr Ser Val Ala Ser Pro Lys
 355 360 365
 Asp Pro Glu Asp Ile Pro Thr Phe Asp Glu Trp Lys Lys Lys Val Met
 370 375 380
 Glu Val Glu Lys Glu Lys Ser Gln Ser Met His Ala Ser Ser Asn Gly
 385 390 395 400
 Gly Ser His Ala Thr Lys Lys Val Gln Lys Asn Arg Asn Asn Tyr Ala
 405 410 415
 Ser Val Glu Cys Gly Ala Lys Ile Leu Ala Ala Asn Pro Glu Ala Lys
 420 425 430
 Ser Thr Ser Ala Ile Leu Ile Glu Asn Met Asp Leu Tyr Met Leu Asn
 435 440 445

Pro	Cys	Ser	Thr	Lys	Ile	Trp	Phe	Val	Ile	Glu	Leu	Cys	Glu	Pro	Ile
450						455					460				
Gln	Val	Lys	Gln	Leu	Asp	Ile	Ala	Asn	Tyr	Glu	Leu	Phe	Ser	Ser	Thr
465					470					475					480
Pro	Lys	Asp	Phe	Leu	Val	Ser	Ile	Ser	Asp	Arg	Tyr	Pro	Thr	Asn	Lys
				485					490						495
Trp	Ile	Lys	Leu	Gly	Thr	Phe	His	Gly	Arg	Asp	Glu	Arg	Asn	Val	Gln
			500					505					510		
Ser	Phe	Pro	Leu	Asp	Glu	Gln	Met	Tyr	Ala	Lys	Tyr	Val	Lys	Met	Phe
		515					520					525			
Ile	Lys	Tyr	Ile	Lys	Val	Glu	Leu	Leu	Ser	His	Phe	Gly	Ser	Glu	His
		530				535					540				
Phe	Cys	Pro	Leu	Ser	Leu	Ile	Arg	Val	Phe	Gly	Thr	Ser	Met	Val	Glu
545					550					555					560
Glu	Tyr	Glu	Glu	Ile	Ala	Asp	Ser	Gln	Tyr	His	Ser	Glu	Arg	Gln	Glu
				565					570						575
Leu	Phe	Asp	Glu	Asp	Tyr	Asp	Tyr	Pro	Leu	Asp	Tyr	Asn	Thr	Gly	Glu
		580						585					590		
Asp	Lys	Ser	Ser	Lys	Asn	Leu	Leu	Gly	Ser	Ala	Thr	Asn	Ala	Ile	Leu
		595				600						605			
Asn	Met	Val	Asn	Ile	Ala	Ala	Asn	Ile	Leu	Gly	Ala	Lys	Thr	Glu	Asp
	610					615						620			
Leu	Thr	Glu	Gly	Asn	Lys	Ser	Ile	Ser	Glu	Asn	Ala	Thr	Ala	Thr	Ala
625					630					635					640
Ala	Pro	Lys	Met	Pro	Glu	Ser	Thr	Pro	Val	Ser	Thr	Pro	Val	Pro	Ser
				645					650						655
Pro	Glu	Tyr	Val	Thr	Thr	Glu	Val	His	Thr	His	Asp	Met	Glu	Pro	Ser
		660						665					670		
Thr	Pro	Asp	Thr	Pro	Lys	Glu	Ser	Pro	Ile	Val	Gln	Leu	Val	Gln	Glu
		675				680						685			
Glu	Glu	Glu	Glu	Ala	Ser	Pro	Ser	Thr	Val	Thr	Leu	Leu	Gly	Ser	Gly
		690				695						700			
Glu	Gln	Glu	Asp	Glu	Ser	Ser	Pro	Trp	Phe	Glu	Ser	Glu	Thr	Gln	Ile
705					710					715					720
Phe	Cys	Ser	Glu	Leu	Thr	Thr	Ile	Cys	Cys	Ile	Ser	Ser	Phe	Ser	Glu
				725					730						735
Tyr	Ile	Tyr	Lys	Trp	Cys	Ser	Val	Arg	Val	Ala	Leu	Tyr	Arg	Gln	Arg
			740					745					750		
Ser	Arg	Thr	Ala	Leu	Ser	Lys	Gly	Lys	Asp	Tyr	Leu	Val	Leu	Ala	Gln
		755					760					765			
Pro	Pro	Leu	Leu	Leu	Pro	Ala	Glu	Ser	Val	Asp	Val	Ser	Val	Leu	Gln
		770				775						780			
Pro	Leu	Ser	Gly	Glu	Leu	Glu	Asn	Thr	Asn	Ile	Glu	Arg	Glu	Ala	Glu
785					790					795					800
Thr	Val	Val	Leu	Gly	Asp	Leu	Ser	Ser	Ser	Met	His	Gln	Asp	Asp	Leu
				805					810						815
Val	Asn	His	Thr	Val	Asp	Ala	Val	Glu	Leu	Glu	Pro	Ser	His	Ser	Gln
			820					825					830		
Thr	Leu	Ser	Gln	Ser	Leu	Leu	Leu	Asp	Ile	Thr	Pro	Glu	Ile	Asn	Pro
		835					840					845			
Leu	Pro	Lys	Ile	Glu	Val	Ser	Glu	Ser	Val	Glu	Tyr	Glu	Ala	Gly	His
		850					855					860			
Ile	Pro	Ser	Pro	Val	Ile	Pro	Gln	Glu	Ser	Ser	Val	Glu	Ile	Asp	Asn
865					870					875					880
Glu	Thr	Glu	Gln	Lys	Ser	Glu	Ser	Phe	Ser	Ser	Ile	Glu	Lys	Pro	Ser
				885					890						895
Ile	Thr	Tyr	Glu	Thr	Asn	Lys	Val	Asn	Glu	Leu	Met	Asp	Asn	Ile	Ile
			900					905					910		
Lys	Glu	Asp	Val	Asn	Ser	Met	Gln	Ile	Phe	Thr	Lys	Leu	Ser	Glu	Thr
			915				920						925		
Ile	Val	Pro	Pro	Ile	Asn	Thr	Ala	Thr	Val	Pro	Asp	Asn	Glu	Asp	Gly
		930				935						940			
Glu	Ala	Lys	Met	Asn	Ile	Ala	Asp	Thr	Ala	Lys	Gln	Thr	Leu	Ile	Ser
945					950					955					960

Val Val Asp Ser Ser Ser Leu Pro Glu Val Lys Glu Glu Glu Gln Ser
 965 970 975
 Pro Glu Asp Ala Leu Leu Arg Gly Leu Gln Arg Thr Ala Thr Asp Phe
 980 985 990
 Tyr Ala Glu Leu Gln Asn Ser Thr Asp Leu Gly Tyr Ala Asn Gly Asn
 995 1000 1005
 Leu Val His Gly Ser Asn Gln Lys Glu Ser Val Phe Met Arg Leu Asn
 1010 1015 1020
 Asn Arg Ile Lys Ala Leu Glu Val Asn Met Ser Leu Ser Gly Arg Tyr
 1025 1030 1035 1040
 Leu Glu Glu Leu Ser Gln Arg Tyr Arg Lys Gln Met Glu Glu Met Gln
 1045 1050 1055
 Lys Ala Phe Asn Lys Thr Ile Val Lys Leu Gln Asn Thr Ser Arg Ile
 1060 1065 1070
 Ala Glu Glu Gln Asp Gln Arg Gln Thr Glu Ala Ile Gln Leu Leu Gln
 1075 1080 1085
 Ala Gln Leu Thr Asn Met Thr Gln Leu Val Ser Asn Leu Ser Ala Thr
 1090 1095 1100
 Val Ala Glu Leu Lys Arg Glu Val Ser Asp Arg Gln Ser Tyr Leu Val
 1105 1110 1115 1120
 Ile Ser Leu Val Leu Cys Val Val Leu Gly Leu Met Leu Cys Met Gln
 1125 1130 1135
 Arg Cys Arg Asn Thr Ser Gln Phe Asp Gly Asp Tyr Ile Ser Lys Leu
 1140 1145 1150
 Pro Lys Ser Asn Gln Tyr Pro Ser Pro Lys Arg Cys Phe Ser Ser Tyr
 1155 1160 1165
 Asp Asp Met Asn Leu Lys Arg Arg Thr Ser Phe Pro Leu Met Arg Ser
 1170 1175 1180
 Lys Ser Leu Gln Leu Thr Gly Lys Glu Val Asp Pro Asn Asp Leu Tyr
 1185 1190 1195 1200
 Ile Val Glu Pro Leu Lys Phe Ser Pro Glu Lys Lys Lys Lys Arg Cys
 1205 1210 1215
 Lys Tyr Lys Ile Glu Lys Ile Glu Thr Ile Lys Pro Glu Glu Pro Leu
 1220 1225 1230
 His Pro Ile Ala Asn Gly Asp Ile Lys Gly Arg Lys Pro Phe Thr Asn
 1235 1240 1245
 Gln Arg Asp Phe Ser Asn Met Gly Glu Val Tyr His Ser Ser Tyr Lys
 1250 1255 1260
 Gly Pro Pro Ser Glu Gly Ser Ser Glu Thr Ser Ser Gln Ser Glu Glu
 1265 1270 1275 1280
 Ser Tyr Phe Cys Gly Ile Ser Ala Cys Thr Ser Leu Cys Asn Gly Gln
 1285 1290 1295
 Ser Gln Lys Thr Lys Thr Glu Lys Arg Ala Leu Lys Arg Arg Arg Ser
 1300 1305 1310
 Lys Val Gln Asp Gln Gly Lys Leu Ile Lys Thr Leu Ile Gln Thr Lys
 1315 1320 1325
 Ser Gly Ser Leu Pro Ser Leu His Asp Ile Ile Lys Gly Asn Lys Glu
 1330 1335 1340
 Ile Thr Val Gly Thr Phe Gly Val Thr Ala Val Ser Gly His Ile
 1345 1350 1355 1359

<210> 1206

<211> 1358

<212> PRT

<213> Homo sapiens

<400> 1206

Met Gly Ala Asp Gly Glu Thr Val Val Leu Lys Asn Met Leu Ile Gly
 1 5 10 15
 Val Asn Leu Ile Leu Leu Gly Ser Met Ile Lys Pro Ser Glu Cys Gln
 20 25 30

Leu Glu Val Thr Thr Glu Arg Val Gln Arg Gln Ser Val Glu Glu Glu
 35 40 45
 Gly Gly Ile Ala Asn Tyr Asn Thr Ser Ser Lys Glu Gln Pro Val Val
 50 55 60
 Phe Asn His Val Tyr Asn Ile Asn Val Pro Leu Asp Asn Leu Cys Ser
 65 70 75 80
 Ser Gly Leu Glu Ala Ser Ala Glu Gln Glu Val Ser Ala Glu Asp Glu
 85 90 95
 Thr Leu Ala Glu Tyr Met Gly Gln Thr Ser Asp His Glu Ser Gln Val
 100 105 110
 Thr Phe Thr His Arg Ile Asn Phe Pro Lys Lys Ala Cys Pro Cys Ala
 115 120 125
 Ser Ser Ala Gln Val Leu Gln Glu Leu Leu Ser Arg Ile Glu Met Leu
 130 135 140
 Glu Arg Glu Val Ser Val Leu Arg Asp Gln Cys Asn Ala Asn Cys Cys
 145 150 155 160
 Gln Glu Ser Ala Ala Thr Gly Gln Leu Asp Tyr Ile Pro His Cys Ser
 165 170 175
 Gly His Gly Asn Phe Ser Phe Glu Ser Cys Gly Cys Ile Cys Asn Glu
 180 185 190
 Gly Trp Phe Gly Lys Asn Cys Ser Glu Pro Tyr Cys Pro Leu Gly Cys
 195 200 205
 Ser Ser Arg Gly Val Cys Val Asp Gly Gln Cys Ile Cys Asp Ser Glu
 210 215 220
 Tyr Ser Gly Asp Asp Cys Ser Glu Leu Arg Cys Pro Thr Asp Cys Ser
 225 230 235 240
 Ser Arg Gly Leu Cys Val Asp Gly Glu Cys Val Cys Glu Glu Pro Tyr
 245 250 255
 Thr Gly Glu Asp Cys Arg Glu Leu Arg Cys Pro Gly Asp Cys Ser Gly
 260 265 270
 Lys Gly Arg Cys Ala Asn Gly Thr Cys Leu Cys Glu Glu Gly Tyr Val
 275 280 285
 Gly Glu Asp Cys Gly Gln Arg Gln Cys Leu Asn Ala Cys Ser Gly Arg
 290 295 300
 Gly Gln Cys Glu Glu Gly Leu Cys Val Cys Glu Glu Tyr Gln Gly
 305 310 315 320
 Pro Asp Cys Ser Ala Val Ala Pro Pro Glu Asp Leu Arg Val Ala Gly
 325 330 335
 Ile Ser Asp Arg Ser Ile Glu Leu Glu Trp Asp Gly Pro Met Ala Val
 340 345 350
 Thr Glu Tyr Val Ile Ser Tyr Gln Pro Thr Ala Leu Gly Gly Leu Gln
 355 360 365
 Leu Gln Gln Arg Val Pro Gly Asp Trp Ser Gly Val Thr Ile Thr Glu
 370 375 380
 Leu Glu Pro Gly Leu Thr Tyr Asn Ile Ser Val Tyr Ala Val Ile Ser
 385 390 395 400
 Asn Ile Leu Ser Leu Pro Ile Thr Ala Lys Val Ala Thr His Leu Ser
 405 410 415
 Thr Pro Gln Gly Leu Gln Phe Lys Thr Ile Thr Glu Thr Thr Val Glu
 420 425 430
 Val Gln Trp Glu Pro Phe Ser Phe Ser Phe Asp Gly Trp Glu Ile Ser
 435 440 445
 Phe Ile Pro Lys Asn Asn Glu Gly Gly Val Ile Ala Gln Val Pro Ser
 450 455 460
 Asp Val Thr Ser Phe Asn Gln Thr Gly Leu Lys Pro Gly Glu Glu Tyr
 465 470 475 480
 Ile Val Asn Val Val Ala Leu Lys Glu Gln Ala Arg Ser Pro Pro Thr
 485 490 495
 Ser Ala Ser Val Ser Thr Val Ile Asp Gly Pro Thr Gln Ile Leu Val
 500 505 510
 Arg Asp Val Ser Asp Thr Val Ala Phe Val Glu Trp Ile Pro Pro Arg
 515 520 525
 Ala Lys Val Asp Phe Ile Leu Leu Lys Tyr Gly Leu Val Gly Gly Glu
 530 535 540

Gly 545	Gly	Arg	Thr	Thr	Phe 550	Arg	Leu	Gln	Pro	Pro 555	Leu	Ser	Gln	Tyr	Ser 560
Val 565	Gln	Ala	Leu	Arg	Pro	Gly	Ser	Arg	Tyr 570	Glu	Val	Ser	Val	Ser	Ala 575
Val 580	Arg	Gly	Thr	Asn	Glu	Ser	Asp	Ser	Ala	Thr	Thr	Gln	Phe	Thr	Thr 590
Glu 595	Ile	Asp	Ala	Pro	Lys	Asn	Leu	Arg	Val	Gly	Ser	Arg	Thr	Ala	Thr 605
Ser 610	Leu	Asp	Leu	Glu	Trp	Asp	Asn	Ser	Glu	Ala	Glu	Val	Gln	Glu	Tyr 620
Lys 625	Val	Val	Tyr	Ser	Thr	Leu	Ala	Gly	Glu	Gln	Tyr	His	Glu	Val	Leu 640
Val 645	Pro	Arg	Gly	Ile	Gly	Pro	Thr	Thr	Arg	Ala	Thr	Leu	Thr	Asp	Leu 655
Val 660	Pro	Gly	Thr	Glu	Tyr	Gly	Val	Gly	Ile	Ser	Ala	Val	Met	Asn	Ser 670
Gln 675	Gln	Ser	Val	Pro	Ala	Thr	Met	Asn	Ala	Arg	Thr	Glu	Leu	Asp	Ser 685
Pro 690	Arg	Asp	Leu	Met	Val	Thr	Ala	Ser	Ser	Glu	Thr	Ser	Ile	Ser	Leu 700
Ile 705	Trp	Thr	Lys	Ala	Ser	Gly	Pro	Ile	Asp	His	Tyr	Arg	Ile	Thr	Phe 720
Thr 725	Pro	Ser	Ser	Gly	Ile	Ala	Ser	Glu	Val	Thr	Val	Pro	Lys	Asp	Arg 735
Thr 740	Ser	Tyr	Thr	Leu	Thr	Asp	Leu	Glu	Pro	Gly	Ala	Glu	Tyr	Ile	Ile 750
Ser 755	Val	Thr	Ala	Glu	Arg	Gly	Arg	Gln	Gln	Ser	Leu	Glu	Ser	Thr	Val 765
Asp 770	Ala	Phe	Thr	Gly	Phe	Arg	Pro	Ile	Ser	His	Leu	His	Phe	Ser	His 780
Val 785	Thr	Ser	Ser	Ser	Val	Asn	Ile	Thr	Trp	Ser	Asp	Pro	Ser	Pro	Pro 800
Ala 805	Asp	Arg	Leu	Ile	Leu	Asn	Tyr	Ser	Pro	Arg	Asp	Glu	Glu	Glu	Glu 815
Met 820	Met	Glu	Val	Ser	Leu	Asp	Ala	Thr	Lys	Arg	His	Ala	Val	Leu	Met 830
Gly 835	Leu	Gln	Pro	Ala	Thr	Glu	Tyr	Ile	Val	Asn	Leu	Val	Ala	Val	His 845
Gly 850	Thr	Val	Thr	Ser	Glu	Pro	Ile	Val	Gly	Ser	Ile	Thr	Thr	Gly	Ile 860
Asp 865	Pro	Pro	Lys	Asp	Ile	Thr	Ile	Ser	Asn	Val	Thr	Lys	Asp	Ser	Val 880
Met 885	Val	Ser	Trp	Ser	Pro	Pro	Val	Ala	Ser	Phe	Asp	Tyr	Tyr	Arg	Val 895
Ser 900	Tyr	Arg	Pro	Thr	Gln	Val	Gly	Arg	Leu	Asp	Ser	Ser	Val	Val	Pro 910
Asn 915	Thr	Val	Thr	Glu	Phe	Thr	Ile	Thr	Arg	Leu	Asn	Pro	Ala	Thr	Glu 925
Tyr 930	Glu	Ile	Ser	Leu	Asn	Ser	Val	Arg	Gly	Arg	Glu	Glu	Ser	Glu	Arg 940
Ile 945	Cys	Thr	Leu	Val	His	Thr	Ala	Met	Asp	Asn	Pro	Val	Asp	Leu	Ile 960
Ala 965	Thr	Asn	Ile	Thr	Pro	Thr	Glu	Ala	Leu	Leu	Gln	Trp	Lys	Ala	Pro 975
Val 980	Gly	Glu	Val	Glu	Asn	Tyr	Val	Ile	Val	Leu	Thr	His	Phe	Ala	Val 990
Ala 995	Gly	Glu	Thr	Ile	Leu	Val	Asp	Gly	Val	Ser	Glu	Glu	Phe	Arg	Leu 1005
Val 1010	Asp	Leu	Leu	Pro	Ser	Thr	His	Tyr	Thr	Ala	Thr	Met	Tyr	Ala	Thr 1020
Asn 1025	Gly	Pro	Leu	Thr	Ser	Gly	Thr	Ile	Ser	Thr	Asn	Phe	Ser	Thr	Leu 1040
Leu 1045	Asp	Pro	Pro	Ala	Asn	Leu	Thr	Ala	Ser	Glu	Val	Thr	Arg	Gln	Ser 1055

Ala Leu Ile Ser Trp Gln Pro Pro Arg Ala Glu Ile Glu Asn Tyr Val
 1060 1065 1070
 Leu Thr Tyr Lys Ser Thr Asp Gly Ser Arg Lys Glu Leu Ile Val Asp
 1075 1080 1085
 Ala Glu Asp Thr Trp Ile Arg Leu Glu Gly Leu Leu Glu Asn Thr Asp
 1090 1095 1100
 Tyr Thr Val Leu Leu Gln Ala Ala Gln Asp Thr Thr Trp Ser Ser Ile
 1105 1110 1115 1120
 Thr Ser Thr Ala Phe Thr Thr Gly Gly Arg Val Phe Pro His Pro Gln
 1125 1130 1135
 Asp Cys Ala Gln His Leu Met Asn Gly Asp Thr Leu Ser Gly Val Tyr
 1140 1145 1150
 Pro Ile Phe Leu Asn Gly Glu Leu Ser Gln Lys Leu Gln Val Tyr Cys
 1155 1160 1165
 Asp Met Thr Thr Asp Gly Gly Trp Ile Val Phe Gln Arg Arg Gln
 1170 1175 1180
 Asn Gly Gln Thr Asp Phe Phe Arg Lys Trp Ala Asp Tyr Arg Val Gly
 1185 1190 1195 1200
 Phe Gly Asn Val Glu Asp Glu Phe Trp Leu Gly Leu Asp Asn Ile His
 1205 1210 1215
 Arg Ile Thr Ser Gln Gly Arg Tyr Glu Leu Arg Val Asp Met Arg Asp
 1220 1225 1230
 Gly Gln Glu Ala Ala Phe Ala Ser Tyr Asp Arg Phe Ser Val Glu Asp
 1235 1240 1245
 Ser Arg Asn Leu Tyr Lys Leu Arg Ile Gly Ser Tyr Asn Gly Thr Ala
 1250 1255 1260
 Gly Asp Ser Leu Ser Tyr His Gln Gly Arg Pro Phe Ser Thr Glu Asp
 1265 1270 1275 1280
 Arg Asp Asn Asp Val Ala Val Thr Asn Cys Ala Met Ser Tyr Lys Gly
 1285 1290 1295
 Ala Trp Trp Tyr Lys Asn Cys His Arg Thr Asn Leu Asn Gly Lys Tyr
 1300 1305 1310
 Gly Glu Ser Arg His Ser Gln Gly Ile Asn Trp Tyr His Trp Lys Gly
 1315 1320 1325
 His Glu Phe Ser Ile Pro Phe Val Glu Met Lys Met Arg Pro Tyr Asn
 1330 1335 1340
 His Arg Leu Met Ala Gly Arg Lys Arg Gln Ser Leu Gln Phe
 1345 1350 1355 1358

<210> 1207

<211> 166

<212> PRT

<213> Homo sapiens

<400> 1207

Met Ala Ser Gly Val Thr Val Asn Asp Glu Val Ile Lys Val Phe Asn
 1 5 10 15
 Asp Met Lys Val Arg Lys Ser Ser Thr Gln Glu Glu Ile Lys Lys Arg
 20 25 30
 Lys Lys Ala Val Leu Phe Cys Leu Ser Asp Asp Lys Arg Gln Ile Ile
 35 40 45
 Val Glu Glu Ala Lys Gln Ile Leu Val Gly Asp Ile Gly Asp Thr Val
 50 55 60
 Glu Asp Pro Tyr Thr Ser Phe Val Lys Leu Leu Pro Leu Asn Asp Cys
 65 70 75 80
 Arg Tyr Ala Leu Tyr Asp Ala Thr Tyr Glu Thr Lys Glu Ser Lys Lys
 85 90 95
 Glu Asp Leu Val Phe Ile Phe Trp Ala Pro Glu Ser Ala Pro Leu Lys
 100 105 110
 Ser Lys Met Ile Tyr Ala Ser Ser Lys Asp Ala Ile Lys Lys Lys Phe
 115 120 125